REGIONAL ANALYSIS OF THE PATTERN OF INTERNAL MIGRATION IN UTTAR PRADESH

DISSERTATION SUBMITTED FOR THE DEGREE OF

Master of Philosophy

IN

GEOGRAPHY

BY

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DEPARTMENT OF GEOGRAPHY
ALIGARH MUSLIM UNIVERSITY
ALIGARH
1987

ACKNOWLEDGEMENT

I am sincerely indebted to my supervisor Professor S.M.Rafiullah for his invaluable help at every stage in the preparation of this dissertation. I am highly grateful to Dr. Farasat Ali Siddiqui, Lecturer in the Department of Geography, Aligarh Muslim University, Aligarh because it would have not been possible for me to complete the present work in the absence of his invaluable help and suggestions.

I wish to express my thanks to Prof. Mehdi Rasa, Chairman of the Department for providing me necessary facilities. I am also thankful to Prof. Mohammad Shafi, Prof. Abdul Aziz, Prof. M.Farooq Siddiqui, Prof. K.Z.Amani and Dr. Hifsur Rehman for the suggestions.

Thanks are due to Mr. S.U.Zuberi, Principal, M.I.College, Sikandra Rao, and Messrs Nawab Sher Mansoori, Aqil Husain, Abdul Qayyum, Mohammad Yasin Ansari and Anwar Ahmad for their encouragement.

I am thankful to Mr. Munney Khan, Technical Assistant, Vital Processes Project for Cartographic Assistance, Mr. Kh. Mobin Ahmad for typing the manuscript carefully and to my wife for cooperation.

Aligarh
1987

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INTRODUCTION

Migration is one of the three most important components of population change. A community or a country can gain population only through the fertility of its inhabitants or by migration and it can lose population only through deaths among its residents or by migration. In other words, migration freequently is a major symptom of basic social change. Every region and every nation that has undergone extensive industrial development has simultaneously undergone a redistribution of its population. The migration process has had a profound effect both upon the areas to which migrants have moved and upon the areas from which they have come. During a period of rapid industrial development, the volume of migrants received in a community may greatly exceed the need. A careful and detailed analysis of migration events can reveal the redistributive effects of rapid social change upon the people.

Migration is a necessary element of normal population adjustment and equilibrium. Within most nations some areas have higher birth rates than others. Some communities are areas of expanding opportunities for employment, while other communities are areas of stationary

or declining economic opportunities. Frequently the communities with declining economic opportunities have higher birth rates. Consequently, a large proportion of children are born in places that offer them little promise of a satisfactory adjustment as adults. By siphoning off excess population into areas of greater opportunity, internal migration becomes a mechanism for personal adjustment for the citizen. For the country it is device for maintaining a social and economic balance among communities.

Migration makes arrangements to utilize the special skills attained by the persons. The persons with special abilities migrate to the communities where their services can be utilized more effectively.

Migration may occur owing to social reasons. Hence, it becomes a regional or national social problem. Scarcity conditions or exhaustion of natural resources can lead to largescale migration from one area to another. It is also an instrument of cultural diffusion and social integration. Migrants to cities from different cultures sometimes create conflicts which may lead to increase of crime, delinquency, broken families, illegitimacy and other problems of social disorganization.

Migration is a specific type of arrangement for making the maximum use of individuals having special abilities. The specific qualifications of a particular person are benificial to the nation only at certain sites, and the persons who possess or acquire certain special abilities are not necessarily born or educated at the site or area where their particular talents are needed. The migration vehicle carries these specialised and brilliant persons to the communities or areas where their services can be used efficiently than previous places.[1]

However, the migration is a result of disparities in the communities, regions, or nations with regard to economic, social, cultural or educational factors. The betterment is the main goal of migrant.

Broadly speaking, there are two major types of migration based on migration defining boundaries i.e. international migration and internal migration. At present the internal migration is of much importance because it affects the economic, social and cultural setup of a country. There are also several other kinds of migrations

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1 Bogue, D.J.,'Internal Migration' in The Study of Population: An Inventory and Appraisal edited by O.D. Duncan and P.M. Hauser, Chicago, 1959, p.487.

such as permanent, periodic seasonal and temporary on the basis of duration.

It may be point out that migration involves a number of merits and demerits regarding socio-economic, socio-cultural, political and religious factors of a community or area. The present dissertation is a preparatory work to the proposed doctoral research on "Regional Analysis of the Pattern of Internal Migration in Uttar Pradesh". It is studied under six chapters with the exclusion of introduction and bibliography. Chapter first deals with internal migration a conceptual framework. Chapter second devotes to significance of internal migration. Chapter third highlights provoking factors and theories of migration. Chapter fourth discuses data base and methodology. Chapter fifth explains a review of available literature. The general background of the study area and a detailed tentative list of proposed doctoral research is noted in chapter six.

CHAPTER I

INTERNAL MIGRATION - A CONCEPTUAL FRAMEWORK

The term migration seems quite easy but it is not so easy to define it. Different authors have defined migration in their own ways. It is the movement of people from one place to another within the country or outside it. According to the Concise Oxford Dictionary, to migrate means to move from one place, country or town to another. Migration is defined broadly as a permanent or semi-permanent change of residence. No restriction is placed upon the distance of the move or upon the voluntary or in-voluntary nature of the act, and no distinction is made between external and internal migration for any specific period or time. So all kinds of spatial mobility are not included in it.[1] According to the United Nations Multilingual Demographic Dictionary, "Migration is a form of geographical mobility or spatial mobility between one geographical unit and another, generally involving a change in residence from the place of origin or place of departure to the place of destination or place of arrival".[2] Migration is only one of

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1 Hear, D.M. (Ed.), Readings on Population, New Jersey, 1968, p.184.

2 United Nations, Multilingual Demographic Dictionary, p.46.

a variety of movements and flows which link regions together in complex networks. It is a form of spatial interaction by which regions of varying levels of economic and social development and rates of growth are connected by streams of persons changing their residence and work places.[3] It distinguishes itself from other forms of human spatial relocation (such as commutation or recreational travel) by the degree of disruption of former living arrangements and by the nature of the regional boundary crossed during a move.[4] Migration among human beings has been defined by Bogue that it is thus a response of human organisms to economic, social and demographic forces in the environment.[5] The demographic section of the United Nations defines migration as the geographical mobility of persons between areas, generally involving a change of residence over a specific period of time. This definition presents many problems when it is applied to movements of population in developing countries, because the degree of mobility varies - some are transhumants, some are shifting cultivators etc.- people may move seasonally from their homes to work in others.

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3 Schwind, Paul J., Migration and Regional Development in United States 1950-1960, Chicago, 1971, pp.3-4.

4 Tajti, E., 'Some Experiences in the Study of Commuting' in Regional Studies, Methods and Analyses, Edited by Benese, Imre and Bora, G., 1974, pp.145-151.

5 Bogue, D.J., 'Principles of Demography', New York: John Wiley and Sons, 1969, p.753.

These types of mobility are not included in the classical definition of migration.[6] French geographers have defined migration as the permanent movements. Pierre George and Beajeu Garnier have termed the temporary movements of varying duration as "turbulence" and 'Oscillation' respectively.

Most of the demographers have considered migration as any shift of a person from one place to another without any consideration of migration defining period or crossing of any administrative or political boundary, i.e. migration defining boundary. Many demographic models assume away the effects of migration, while many geographical studies are less concerned with the demographic impact of migration than with relationships between movement, distance and interacting areas.

Migration involves different criteria such as distance, duration, cause and nature of decision making. Distance refers to inter continental, international and internal migration. Duration indicates permanent, semi-permanent, seasonal and daily migration. Cause of migration

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6 Zelinsky, W., Kosinski, L.A. and Prothero, R.M., (Eds.), Geography and Crowding World, London, 1970, pp.251-255.

is related to economic, political, religious and educational factors. Nature of decision making involves voluntary and compulsary migration.

The inter-continental migration is of least importance nowadays. Only the international and internal migrations are under practice. In international migration we include all those movements involving the crossing of one or more frontiers not merely between adjacent countries but often from one continent to another for a particular period of time. Other than internal migration, all various types of migration as mentioned above, may be defined in the same way as international migration has been defined for a particular migration defining boundary and migration defining period.

Internal migration is the movement of people within the country. It varies considerably from a few kilometres to several thousand kilometres, for example, migration to Bombay, Calcutta, Madras and Delhi from every corner of the country. On the other hand, people are constantly changing residence from one town to another town or one village to another due to matrimoney, occupation or several other reasons. The operational definition of

migration as change of residence from one administrative division to another is generally applicable to internal migration.[7] Thomas defines internal migration is the change in residence from one community or clearly defined geographical unit to another within the national boundaries.[8] This definition is not free from ambiquities. There are people who do not have fixed residences, so it is difficult to distinguish between a 'mover' and 'migrant'.[9] Theoretically, the term migration is reserved for those changes of residence that involves a complete change and readjustment of the community affiliations of the individual. In the process of changing his community of reisence, the migrant tends to change employers, friends, neighbours and many other social and economic ties.

On the other hand, the 'local movers' may simply move across the street or to a house a few blocks away and very likely he retains his same job, breaks no communities and maintains most of his informal social relationship.[10]

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7 Sharma, R.N., and Sharma, R.K., "Demography and Population Problems" Meerut 1983, p.192.

8 Quoted in Zakariah, K.C., 'A Historical Study of Internal Migration in the Indian Subcontinent, 1901-1931, Bombay, 1964, p.8.

9 Bogue, D.J., op. cit., pp.756-758.

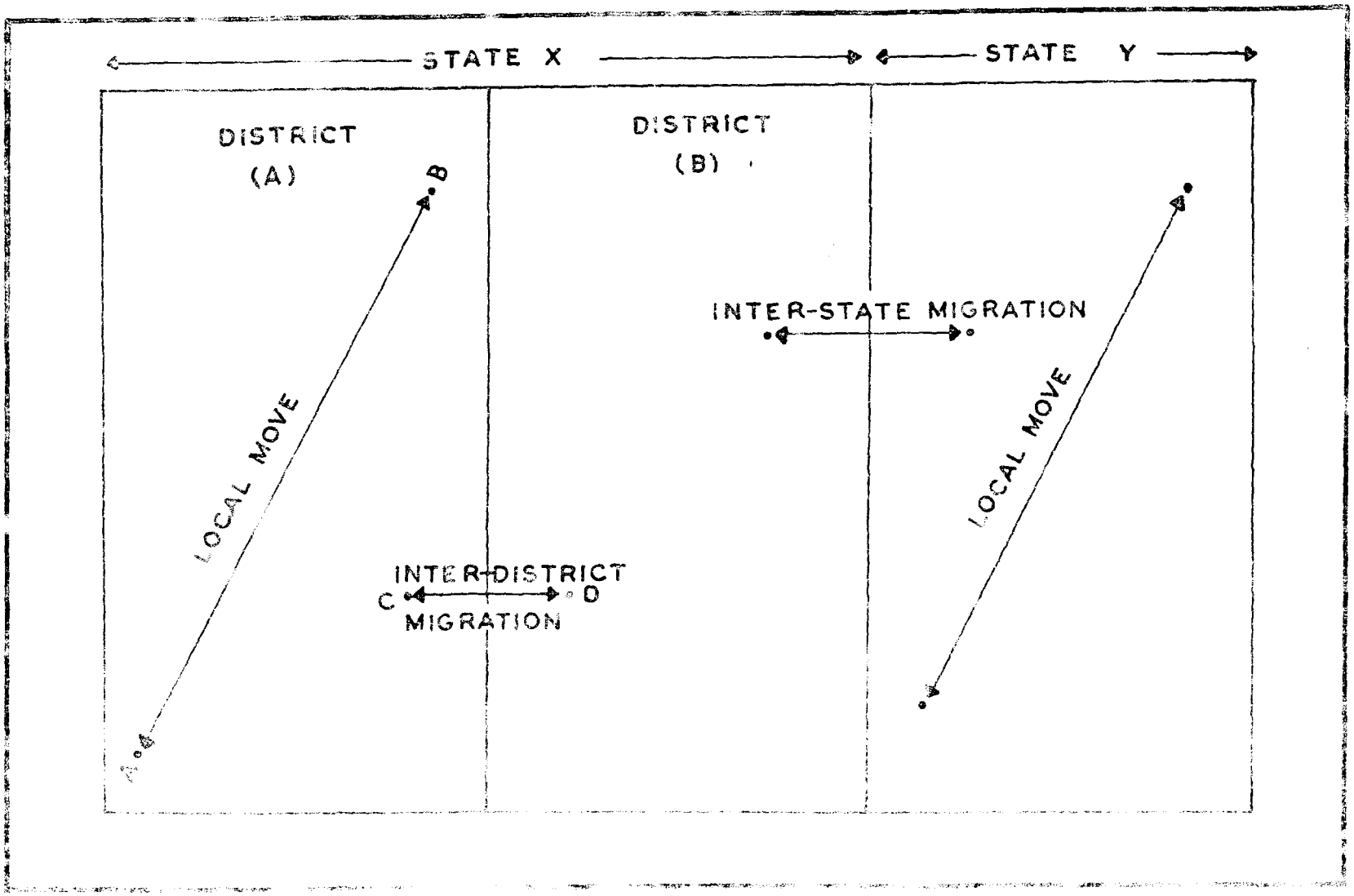
10 Bogue, D.J., 'Internal Migration' In The Study of Population, Edited by Hauser, P.M. and Duncan, O.D., The University of Chicago Press, Chicago, 1959, p.489.

The only practicable way for making such separation, even approximately, to set-up boundaries which if crossed in the act of changing residence, will constitute migration. Therefore, Bogue presents the two basic concepts for defining internal migration i.e. migration defining boundaries and migration defining period.

MIGRATION DEFINING BOUNDARIES

In order to find out the actual number of migration, we would have to fix certain political boundaries. This boundary will be known as migration defining boundary. We are concerned with the assumption of a'district boundary' as a migration defining boundary. Therefore, if a person crosses this district boundary he will be known as a migrant. If a person does not cross a district boundary in his change of residence, he will be considered simply as a 'local mover' and this movement will come under the heading of 'local movement' although he might have travelled a longer distance than a technically defined migrant. Fig.I shows that the distance between A and B is greater (but within a district) than that of C and D between two districts, therefore, any person who changes his residence from C (in one district) and arrived at D in another district is called 'migrant', while a person who changes his residence from A (within a district) and arrived at B is called 'local mover' though the distance between A and B is greater than that of C and D.

MIGRATION DEFINING BOUNDARIES



The selection and adoptation of a boundary as migration defining boundary is a matter of choice dependent upon the nature and scale of the study. This implies that all the administrative boundaries are not necessarily migration defining boundaries. A boundary may be migration defining in one case but may not be so in others e.g. in the study of internal migration in Uttar Pradesh as a whole, the district boundaries will function as migration defining boundaries, but those of its sub-divisions (Tahsils and blocks) will not perform the same function. On the contrary, in the study of internal migration of a state, the boundaries of even the smallest sub-divisions of a district will be taken as migration defining lines. But there are certain limitations in it. Any migration defining boundary must be specified as a line upon the earth. There will always be a certain section of population which, being settled close to the defining boundary, will become migrant simply by moving across the street or a route. For this reason the boundary definition of migration can never completely seperate the inter-community migrants from local movers.[11]

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11 ibid., p.490.

MIGRATION INTERVAL

Migration is an event that occurs in time. It is necessary to specify the interval of time over which it is to be observed. Generally the intervals of one, five and ten years have been used. The larger the length of the interval, the smaller is the size of the average annual number of migrants, because a significant proportion of persons who migrate, returns rather promptly to the place from which they started.[12] We are concerned with a migration interval of intercensal period, i.e. ten years. Therefore, if a person changes his place of residence for ten years or more, he will be known as migrant. There are certain limitations in it. It is not necessary that a migrant will be only one who devotes his ten years in the act of changing residence to another place but may also be one who passes his time for less than ten years, even one year or less than it, e.g. if a person remains outside of his place of residence at the time of census, he is considered as a migrant, when the shift of the person involves the crossing of migration defining boundary. Therefore, for

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12 Bogue, D.J., 'Principles of Demography', New York, 1969, p.757.

an intercensal migrant, it is not clear, how much time did he devote in the act of migration, but an idea can be taken that he has passed his time in another state or district for one to ten years.

The second limitation of it is that a person may be classed as non-migrant while he has been busy in moving away from his place of residence for even nine years or more (but less than ten years) because he returns to his place of residence within ten years or before the date on which the census is taken and is entered in the list of the residents of that place not in the list of migrants.

DEFINITIONS OF THE TERMS USED IN MIGRATION ANALYSIS

Often, we have to come across the various terms which are to be used in migration. It will be better to define the terms before a discussion on the types of internal-migration. The term in-migration may be defined as the movement of persons across a migration defining boundary in a given time interval in the process of changing residence and entering a given area from others areas of the same nation.[13] The term immigrant refers to in-coming

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13 ibid.

international migrant.[14] Out migration may be defined as the movement of persons who cross a migration defining boundary from one area to reside in an other within the same nation. The term emigration may be defined as the outflux of persons from a country. Net internal migration is the migration balance of a community or area. It consists of the number of in-migrants minus the number of out migrats. The net balance may be either positive (representing a net gain to the community) or negative (representing a net loss to the community).[15] Area of origin refers to the area or community from which a migrant departs. Area of destination is the area or community to which a migrant travels. Migration stream refers to a body of migrants that departs from a common area of origin and arrives at a common area of destination during a specified migration interval. Migration pattern is the configuration of migration streams during a given time interval. Gross migration is the sum of the in-migrants and out-migrants. It is a measure of the total volume of population turn over that a community is experiencing.

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14 Bogue, D.J., Internal Migration, op. cit., p.490.

15 ibid., p.490.

Migration rate may be defined as the ratio of migrants observed to the population exposed to the likelyhood of migrating during a specified migration interval. The migration rates refer to the relative frequency with which the event of migration occurs. It is a probability number. It is the number of migratory events divided by the population exposed to the possibility of migration. There are four types of migration rates:

I. Out-migration rate: $\frac{O}{P} \times K$

II. In-migration rate: $\frac{I}{P} \times K$

III. Net migration rate: $\frac{I-O}{P} \times K$

IV. Gross migration rate: $\frac{I+O}{P} \times K$

where,

'O' stands for out migrants from an area,

'I' stands for in-migrants to an area,

'P' refers the average or midinterval population of an area and,

'K' constant usually 100 or 1000.

All these migration rates may be computed as specific rates where enumerator and denominator refer to the same particular subgroup of the population. Thus these may be rates that

are specific for sex, marital status, educational attainment, occupation, income and so on.

A life time in-migration may be defined as the movement of the persons, enumerated in a given area at a particular census, who were born outside the area of enumeration but within the national boundaries. A life time out-migration is the movement of the persons born in a given area and enumerated outside the area in a given census but within the national boundaries. A life time net-migration is the difference between the life time in-migration and the life time out-migration. A marriage migration may be defined as the migration of the persons who cross a migration defining boundary in the process of changing residence, the change of residence being occasional by marriage. Marriage ancillary migration may be defined as the ancillary movements across a migration defining boundary caused by marriage migration, e.g. the returning of women to their parent's home at the time of their first confinement.

Differential migration may be defined as the study of the differences in the rate of migration among various demographic, economic and social groups of population. It, also, applied to the study of differences in population composition between migration streams. The study of

differential migration is equivalent to the study of 'migration selectivity' e.g. the tendency for some sections of the population to be more migratory than other sections. The incidence of migration is greater among some segments of population than among others. After a thorough study and a long period of time Dorothy S. Thomas came to the conclusion that the only differential that has held with some consistency in several context and over a long period of time, is that the persons in their late teens, twenties and early thirties were more migratory than other groups. Clarke mentions in connection with the selectivity of migration that in advanced countries short-distance internal migrants are predominantly female, while long-distance internal migrants are predominantly male.[16] It is only by studying selective migration that one can comprehend how particular changes in population composition have occurred. By studying the characteristics of migrants, one can gain deeper insights into the nature of changes that are occurring in the places of a origin and that of destination. By comparing the relationships between the types of selectivity and the type of change that is occurring, one can gradually

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16 Clarke, J.I., "Population Geography", London 1972, p.151.

develop principles of selectivity that can be used to predict the future selective course of major types of migration.

TYPES OF INTERNAL MIGRATION

Types of internal migration may be studied in different ways. Sociologists and demographers have divided it on the basis of different criteria into a number of divisions. K.C. Zachariah divides internal migration into a number of types, selecting three criteria, namely, distance and duration of residence involved in the migration, types of community of origin and destination and lastly, the motivation.[17]

I. (a) On the Basis of the Distance of Movement

On the basis of the distance, Zachariah, assumes internal migration as the short distance and the long distance. Thus in India one may classify internal migration into interstate, interdistrict etc., because allied to the distance criterion is that of the type of political unit entered or left in the process of movement.

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17 Zachariah, K.C., op. cit., pp.250-255.

(b) On the Basis of Duration of Residence in the Community of Destination

By this criterion the usual classification in the Indian census is casual, temporary, periodic, semi-permanent and permanent. In India, the casual migration includes the minor movements between neighbouring villages mainly for social events. Temporary migration includes the movement on public works such as canals and railways or pilgrimages. Periodic migration occurs due to the seasonal demand for the labour at the time of the harvest. Semipermanent migration is the migration of government officials and domestic servants. There is the permanent migration in the nature of colonisation, e.g. during 1921-1931 the population of Bikaner increased 41.9 per cent by immigration for the construction work on irrigation projects.[18] There tends to be a positive association between duration of residence and distance of migration. However, the associations may not be very close, therefore, the classification on the basis of duration has given additional information which is not obtained through classification by distance of movement.

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18 Shirras, G. Findlay, Census of India 1931, Geographical Review, Vol.25, July 1935, p.459.

2. (a) On the Basis of Types of Community of Origin and Destination i.e. Rural and Urban

On this basis, migration may be classified as rural to urban, rural to rural etc. which may consider a more extensive classification alternatively, such as rural farm, rural non-farm, metropolitan areas, other cities, towns etc. Within metropolitan areas we may consider the central city and suburbs seperately.

(b) On the Basis of Nature of Community of Origin

On this basis migration may be classified as primary, secondary and return. A primary migration is one in which the community of origin is the community of birth. A secondary migration is one in which the community of origin and destination are different from the community of birth, and in return migration the destination is community of birth.

3. On the Basis of Motivation

In the classification of migration, motivation is the third and most important criterion. On this basis we may differentiate migration as voluntary, obligatory and sequential. Voluntary migration results from personal choice. Migration results from shifts of personnel from one place

to another. Under service contacts, the wife's moving to the husband's place etc. are examples of obligatory migration. Under the sequential migration we consider the movements of dependents who follow voluntary or obligatory migrants.

The demographic section of the United Nations classifies the internal migration as follows:[19]

I. Movement from one region of a country to another.

II. Movement from rural to urban areas or from urban areas within the same region.

III. Short distance moves from city to another or from one rural district to another.

IV. Movement between farming and non-farming areas within a rural district.

Ashis Bose has distinguished three types of internal migration based on relationship between distance and migration;[20] They are:

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19 United Nations Publications, The Determinants and Consequences of Population Trends 1953, 1954, New York, p.107.

20 Bose, A., 'Migration Streams in India', Population Review, Vol.II, No.2, July-December 1967, p.40.

I. Short distance migration: The movement of the persons born outside the place of enumeration but within the district of enumeration (Intra district migration);

II. Medium distance migration: The movement of the persons born outside the district but within the state of enumeration (inter-district migration or intra-state migration).

III. Long distance migration: The movement of the persons born in states of India beyond the state of enumeration (Inter-state migration).

Bose points out, relative share of each of these migration categories (Table 1).

Table 1

Percentage of total migrants by migration types

Migration Type	Total	Male	Female
I. Short distance	67.8	54.4	73.8
II. Medium distance	21.4	26.8	19.0
III. Long distance	10.8	18.8	7.2
Total	100.0	100.0	100.0

Table 1 shows that a little over half of the male migration and about three-fourths of the females are considered under short distance migration. In medium and long-distance migration the percentage of males increases. Bose on the basis of the cross-classification of data on migration by place of birth and place of residence and considering the rural/urban breakdown, has pointed out four migration streams of rural to rural, rural to urban, urban to urban and urban to rural.

Rural to Rural Migration - According to G.S. Gosal there has been extremely slight rural to rural migration in India, because cultivation has already been extended almost to the maximum limit under existing techniques of farming, economy and few other activities have been started on any appreciable scale which could encourage migration. The magnitude of movement which has taken place to a few new farm lands and areas of plantation agriculture, though significant, is far smaller than that of urban places. In a large majority of the districts of India over 95 per cent of rural population is that born within the district of enumeration. Much of the inter-district migration that does take place is due to marriages. The mariage migration in rural areas is reflected

to a degree in the excess of females over males among the in-migrants.[21]

Rural to Urban Migration - Rural to urban migration is an important form of internal migration. It is much more important in the countries experiencing industrialisation and rapid technological change. It has played a major role in economic development and increases per capita income. In it, the rural areas act as 'Push areas' due to population pressure, modernisation of agriculture and traditional system of land tenure, while the urban areas present a 'pull' for migrant giving employment opportunities.[22]

The process of urbanisation is connected with it because rural to urban migration is the change of residence from a place outside the boundaries of an urban to a residence inside. When the proportion of the urban population is very small or very high, rural to urban migration may form only a relatively small percentage of the total, between the degree of urbanisation is in the intermediate range, migration of this type will play a large role. Although India is still

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21 Gosal, G.S., 'Internal Migration in India - A Regional Analysis', The Indian Geographical Journal, Vol.36, No.2, 1961, p.110.

22 Clarke, J.I., op. cit., pp.129-130.

a nation of villages inhabitated by small scale farmers and farm labourers, there has been a significant growth in urban population, employed in industrial occupations and services since the second decade of the present century.[23]

Gosal,[24] in connection with rural to urban migration in India asserts that of the total internal movement the greatest movement is that of the rural to urban migration. But unfortunately no data have been collected on this subject at any census. In the first two decades of the present century the urban population like the rural population increased but little. But from 1921 onwards the rate of increase has accelerated. In the absence of separate data on the natural increase of urban and rural population, it is not possible to determine what proportion of these increases in urban population during each decade has been due to natural increase and what proportion has been due to migration. If, in order to assess the magnitude of rural to urban migration during 1921-51, we apply the rates of natural increase of the total population to the urban

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23 Eames, E., 'Urbanisation and Rural to Urban Migration in India', Population Review, Vol.9, No.1, 1965, pp.45-46.

24 Gosal, G.S., op. cit., p.109.

population in each decade, we find that, in these thirty years of the total increase of the country only 12.9 millions were natural increase and the remaining 20.8 millions were due to rural to urban movements.

It is obviously not necessary that as a result of the process of urbanisation all urban places would exert the same magnitude of pull, some might attract more migrants than the others. Among the factors which determine the nature and magnitude of this pull, the type and number of functions and size of area an urban places is serving are the most important.

Urban to Urban Migration - The migration in which both the area of origin and the area of destination are the cities, is known as urban to urban migration. The tendency of this type of internal migration is continuously increasing in India. In some cities like Madras, it has assumed a sizable proportion.[25]

Urban to Rural Migration - The migration in which the area of origin is a city and the area of destination is a village, is known as the urban to rural migration. This type of

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25 Agarwala, S.N., 'India's Population Problem, New Delhi, 1975, p.152.

migration has been also observed in case of Indian internal migration. Generally people of advanced ages appear to dominate in this type of migrations as the studies of movements from city to country-side reveal that a relatively large proportion of migrants were middle aged or old persons born in the countryside who after spending their most productive year in the city had returned to the land. Another form of urban to rural migration is the movement of a female from her husband's house (city) to her father's home (i.e. a village) at the time of her first confinement. On the whole it appears that such type of migrations are generally obligatory and sequential, in a very few cases urban to rural migrations may be found voluntary.

Considering the internal migration in India as a whole it may be observed that the magnitude of internal migrations in India is very small as compared to the total population of the country. The extent of lack of mobility of Indian people can be seen on comparison with other countries. Though such a comparison is difficult to make because the population and areas of countries and their sub-units are not comparable, nevertheless, it may bring out some fundamental differences. In 1940, no less than

22.5 per cent of the native population of the U.S.A. (as compared to 5.5 per cent in India in 1951) lived outside the state in which they were born.[26]

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26 Davis, K., The Population of India and Pakistan, Princeton University Press, Princeton, 1951, p.104.

CHAPTER II

SIGNIFICANCE OF INTERNAL MIGRATION

Migration is one of the three major components of population change. The other two components of population change are fertility and mortality. Population grows or declines in size due to the effect of these three components. A community or a nation can gain population only through fertility of its inhabitants or by in-migration, and it can lose population only through deaths among its residents or by out-migration. As a component of population change, migration occupies a central place in demographic analysis and in these three elements of population change (namely, births, deaths and migration) migration is much more important variable![1]

Migration is not merely movement of people, but it is a fundamental factor helping to explain the ever changing space content and space relations in a country. It is a vital process bringing in changes in the distributional pattern of population, and is thus basic to understanding the spread

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1 Benjamin, B., 'Demographic Analysis', Edited by Williams, W.M., University College Swansia, 1968.

of people at any given moment in time.[2] Migration may be demographic problem because it influences sizes of population at the origin and destination. It may be an economic problem because a majority of the shifts in the population is due to economic imbalances between areas. It may as well, be a political problem because it includes the crossing of a political boundary. It may also involve problems of social psychology insofar as the migrant is involved in the process of decision making before moving and that his personality may play an important role in the success with which he integrates into the host society. It is also likely to raise some sociological problem as the social structure and cultural system both of places of origin and of destination are affected by migration and in turn affect the migrant.[3]

Migration is a major symptom of basic social change. Every region and nation that has undergone extensive industrial development has undergone a redistribution of its population. The development of great metropolitan centres, the exploitation of new resources and the opening up of

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2 Gosal, G.S., 'Internal Migration in India - A Regional Analysis', The Indian Geographical Journal, Vol.36, No.2, April-June, 1961, pp.106-119.

3 Jackson, J.A. (ed.), Migration, p.60.

new regions for settlement all have involved large influx of migrants streams. These migrants have been drawn from the areas of older settlement. The migration process has a significant effect upon the areas from which they have followed. During a period of rapid industrialisation, the volume of migrants received in a community may greatly exceed the need. The streams may originate in the communities different from those from which it is desired to draw migrants, or the streams may consists of persons having qualifications different from those needed at a given spot at a given time. Only a careful and detailed analysis of migration events can reveal the redistributive effects of rapid social change upon the people. If there is a desire to control or regulate these redistributive effects, thus control must be based upon the knowledge of internal migration.

Migration is a necessary element of normal population adjustment and equilibrium. In most of the countries, some areas have higher birth rates than others. In the same way some communities are the areas of expanding opportunities for employment while others may be having stationary or even declining economic opportunities. Not in frequently, the communities with declining economic opportunities have very

high birth rates resulting in a situation of intense imbalance between demand of opportunity of gainful employment. If migration is suddenly to be stopped a very short time would be required for population to 'pile-up' in areas of rapid growth. Thus migration is a process for preserving an existing system.

Migration is an arrangement for making maximum use of persons with special qualifications. The special abilities of a particular person are useful to the nation only at certain sites and persons who possess special abilities are not necessarily born or educated at the sites where their talents are needed. Migration moves these specialised persons to the communities where their services can be used effectively. Youths, who have aspirations to be physicians, engineers, scientists, artists or take up other kinds of specialised professions move first from their place of birth to a place where they can be trained and then to a place where they can be employed. The girls tend to participate in this adjustment, through the employment adjustments of their husbands or guardians.

Migration is a social problem of both regional and national dimensions. A prolonged draught or famine, the exhaustion of timber, minerals or agricultural resources, a

series of unfavourable growing seasons, or prolonged social or political appression can lead to a large scale migration from an area to other parts of the nation. Because migration of this type usually has its stimulus in hardship and disaster, the migrants tend to be in need of assistance from the nation as a whole or from the communities through which they pass and at which they arrive. In accepting responsibility for provision for their needs, the nation should have an accurate and detailed knowledge about the size, composition and condition of the migration streams.

Migration is an instrument of cultural diffusion and social integration. The person who migrates from one community to another, tends to be a disruptive force in the community in which he enters. If members of one culture invade a community of another culture in large numbers, they tend to form a community within a community and to create cultural diversity and ethnic tension. Only by a slow process of assimilation, which sometimes takes a generation or more, the migrant group and the receiving community are finally adjusted to each other. In this process the culture of receiving community may be changed appreciably.

Migration is the major unknown component of population estimates and forecasts. Even where fertility and mortality

can be projected with reasonable accuracy, estimates and forecasts for cities regions cannot be made with any degree of reliability unless one is able to forecast the probable future course of internal migration. Within a nation migration is able to off-set completely or to reinforce greatly the population change resulting from natural increase. Internal migration is involved in such a variety of social, economic and political problems of a nation, there is wide spread need for knowledge about it. However, one who specialises in migration analysis finds many of his explanatory hypothesis in the field of economics, sociology, geography and technology.[4]

EFFECTS OF MIGRATION

Mobility is one of the vitally important attributes of a population. The residential stability or instability exerts a powerful conditioning influence upon all other demographic phenomena and processes. The original community, the one into which the newcomer intrudes and the migrant himself, are never again the same.[5]

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4 Bogue, D.J., 'Internal Migration' in The Study of Population: An Inventory Appraisal, edited by Hauser, P.M. and Duncan, O.D., The University of Chicago Press, Chicago, p.486.

5 Gosal, G.S., 'Internal Migration in India', Indian Geographical Journal, Vol.36, No.2, April-June, 1961, p.106.

Internal migration is much more important so far as the economic and social conditions are concerned. It has its influence both in the areas of in-migration and out-migration, summarised under five points as follows:[6]

I. Effects on economic development and output
II. Effects on manpower and dependency
III. Effects on occupational composition of population in both the area of in-migration and out-migration
IV. Effects on wages and employment, and
V. Social problems

I. Effects on Economic Development and Output

Internal migration levels the wages and diminishes unemployment. It is an essential instrument in the development of the economy and in the increase of per capita income and wealth.[7] Rural to urban migration has played a significant role in the economic development and, also, in the rise of per capita income and wealth. The migration of labour group from agriculture and other types of primary

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6 U.N. Publications, The Determinants and Consequences of Population Trends, 1953, 1954, New York, p.300.

7 Zelinsky, W., Kosinski, L.A. and Prothero, R.M. (ed), Geography and Crowding World, London, 1970, p.251.

production into secondary and tertiary industries has made possible the great increase in per capita output.

It is, but not always, true that all population movements from one part to another part of the country raise the average level of per capita output in the long run. In some case due to out-migration, the economic standard may fall, because of out-migration of skilled labourers.

Misguided and strange migrations may, generally, create economic difficulties in the area of in-migration. It is not sure that the judgements of individual or group migrants will always be profitable in areas, they are going to settle. It is also observed sometimes, that a migrant only worsen his position in the long run instead of betterment.

The concept of an 'optimum distribution' of population over the territory of a country has been developed by some analysts. This concept tells that internal migration may be said to be economically advantageous so far as it brings the actual distribution closer to the optimum. Many analysts analysing regional variations in per capita income and wealth in France, judged that further changes in geographic distribution of population would tend to raise national per capita output. They found that internal

migrations which were taking place have not been sufficient to achieve the highest possible level, though they were generally in the direction of raising the level of per capita output.

Taenber[8] has made generalisation that, in countries with marked internal differences in rates of reproduction and employment opportunities, a higher degree of spatial mobility of labour, than usually exist, is needed inorder to maintain an effective balance between population and resources.

II. Effects on Man Power and Dependency

Internal migration increases the size of economically active population in relation to the total population and to lighten the burden of dependency, in the areas of in-migration. On the contrary, in the areas of out-migration, it has its reverse influence. The young adults have the greatest mobility because in early years of adulthood, men and women have the best opportunities of employment and are least strongly bound to family and surroundings. Young workers tend to be employed in relatively unstable occupations.

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8 Taenber, I.B., 'Migration and Rural Population Adjustment', 1940, p.399.

Marriage and establishments of new homes also cause migration of young people.

So far as the sex ratio among internal migration is concerned, it does not follow any pattern, but in general it appears that men are more willing to migrate than women. The migration of female domestic servants tends to raise female mobility due to increasing employment of women in urban occupations during recent decades. Thus, migrations always disturb the age and sex ratio of the population. Because the migrants are mostly the males in India and when the whole family migrates, a high fertility rate exists there because the newcomers do not adopt immediately the urban family patterns. As a result, migration produces the pressure in destination areas, e.g. in India a long absence of males in a high proportion produces problems in the area of origin i.e. demoralisation.[9]

Some of the demographers have stated that the migration of young adults from rural to urban areas has a significant contribution from rural farms to the wealth of cities. Because the cities are provided with a young labour force, free of cost, the rural population pays the cost of rearing and educating the migrants.

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9 Zelinsky, W., op. cit., pp.254-255.

III. Effects on Occupational Composition of Population

Rural to urban population movements result in a change in the ratio of non-agriculture to agriculture labour force. It is not easy to generalize the influence of internal migration on the composition of the labour force in areas of in-migration and out-migration. To what extent occupational shifts are related with internal migration and to what extent migrants improve their economic position by migration, is difficult to say, due to less studies in this connection. Only it may be said that changes in occupational classes, as a result of migration, are rather slight.[10]

IV. Effects on Wages and Employment

Internal migration reduces geographical differences in wage rates and unemployment. Internal migration in a country with a free economy, also, tends to reduce the living standards. These are as a result of temporary maladjustments between the geographical distribution of labour supply within a country and the distribution of demand.

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10 Beers, Mobility of Rural Population, 1947, pp.35-40.

Pierson, J.W., The Moving American, New York, 1973, p.193.

It is possible that internal migration may reduce unemployment not only by improving the distribution of labour force in relation to employment opportunities but also by increasing the total demand for labour. A large scale internal migration increases the need for investment in housing, transportation facilities, stores and public services in areas of in-migration, so it will reduce the opportunities for investment in the areas of out-migration. But the net result will be an increase because investment in the areas of out-migration cannot fall below zero.

V. Social Problems

Internal migration may create many social problems due to movement of the persons from one social and cultural unit to another, with different setting, social maladjustments come into being. Higher rural to urban migration rates cause the conjection of slums, bad habits of young persons, prostitution, suicide, nervous diseases, health hazards and other inconvenient living conditions. Contagious disease spreads under crowded conditions and unhygienic atmosphere within dwellings leads to a high incidence of tuberculosis.[11]

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11 Brown, L.R., In the Human Interest, New Delhi, 1974, pp.108-111.

In this connection Kirk[12] suggested that the influence of this factor may be reduced by the fact that the majority of in-migrants into largest cities do not come directly from purely rural areas but from smaller cities and towns with a somewhat intermediate environment. Internal migration may also raise certain social problems in out-migration areas, i.e. maladjustments in social organisations and institutions may be created on the other hand, rural to urban migration may select the best educated and the most intelligent of rural population.[13] In this way the rural districts are deprived of leadership and of the capacity for social advancement.

Sometimes, it has been observed that the migrants to cities from dissimilar culture undergo personal disorganisation as a result of conflict between two sets of flokways and systems of values. Migration disturbs the traditional control and it also increases the crimes. It may lead to an increase of illegitimacy, broken families and other social problem indicative of social disorganisation. Sudden enterence of large numbers of migrants in a new community can lead to different kinds of intergroup tensions and unrest.

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12 Kirk, Europe's Population, 1946, p.160.

13 Lively and Taeuber, Rural Migration, 1939, p.20.

CHAPTER III

PROVOKING FACTORS AND THEORIES OF MIGRATION

PROVOKING FACTORS OF MIGRATION

The motives leading to migration have probably varied but little in general character from age to age. If a direct question, like, 'why have you migrated' is asked from migrants it is more likely that they would not be able to give any specific and precise response to such a query.[1] They would rather answer the question in a very general style giving reasons like work, a family circumstances, studies etc. Though for a broad idea of the causes of migration only one word — 'dissatisfaction' might almost be a sufficient explanation, however, it relates to only one of the two basic components of migration generating force i.e. the negative or the push factor. Equal significant may be another word 'ambition's which would refer to the positive or pull factor of the force. The two when combined together would provide the fundamental basis for developing detailed explanations of the commission of the act of migration'.[2]

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1 Garnier, J.B., Geography of Population, p.212.

2 ibid.

Thus for a large number of migrants the common stimulants and repellants may be established as there are positive and negative aspects of the provoking force. For the migrants seeking an opportunity to improve his life, the destination exerts a 'pull' on him while in case of a person who seeks in-migration an escape from undesired social and economic conditions, the place of origin is considered to exert a 'push'. But the migration phenomena cannot attributed to either the pull-factor or the push-factor alone because several variables of both types may be simultaneously operating and interacting.[3] The conditions which impel people to migrate from one region to another within the same country are often quite similar to those provoking international migrations. An area where employment opportunities are expanding, real wages are high, good land is available for settlement, may attract migrants from foreign as well as from less favoured regions of the same country. Differences in rates of growth among regions of the same country may create the currents of internal migration, in the same way as international differences may produce internation migration.[4]

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3 Bogue, D.J., Principles of Demography, New York, 1969, p.753.

4 U.N. Publication, The Determinants and Consequences of Population Trends, 1953, New York, 1954, p.123.

Here we are mainly concerned with internal migration and since the fact that recent surveys have shown that the rural to urban migrations are relatively more important. The study of the migration provoking factors here is attempted to be made mainly with reference to village to city or town migration. The causative factor of internal migration may be broadly categorized as economic, demographic, social, cultural, political, and geographical factors.

ECONOMIC FACTORS

The economic motive has probably been dominant at all times, although not of equal importance in all particular movements. Clans, tribes, nomadic, shephards and other regularly migratory groups have always moved as seemed best to them in order to make a living, although the force exerted on weaker by more powerful kinship groups and by military groups in search of better living, has very frequently made necessary the migration of a weaker group in order to escape annihilation.[5]

The act of migration is motivated due to the desire to better one's position economically. The search for better

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5 Thomson and Lewis, Population Problems, p.479.

opportunities has been the dominant motive among both international and internal migrants. Comparatively few people or individuals who are reasonably well satisfied with their economic position move to new homes. It is merely a recognition of the fact that far away the most important cause of migration was the desire to improve economic status.

Economic motives are dominant in rural to urban and other types of internal migration as well as in international migration.[6] This statement given by Thompson is based upon a sample survey in the U.S.A., which indicated that most important reasons for migration were either to take a job or to look for work. The economic factors are more potent in respect of internal migration but relatively less so in case of international migration, because, in the former case, the intervening obstacles are comparatively weak and less. Further, we may subdivide the economic factors as (a) those which are related to the condition of agriculture i.e. primarily 'push' factors, (b) those which are related to the non-agricultural economy, i.e. 'pull' factors and (c) more general economic factors.

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6 Thompson, Population Problem, New York, 1953, p.393.

Rural population is very largely dependent on the agricultural land but the landless agricultural workers get low wages. So the poorly paid farm labourers have to move towards the urban centres and occupations to earn high wages and to better their income.[7] Some authors have mentioned that the inheritance laws do not permit the division of property and therefore stimulate many young people to migrate to the cities.[8] The division under laws of inheritance makes the holdings smaller than the previous one, the size of which is based upon the number of divisions of the land. So when the land is broken-up into holdings that are too small to support a family, the divided inheritance may act as a 'push' factor of migration. The loss of farm may also be an incentive for migration.[9]

The modernisation of agriculture i.e. the implementation of new techniques and know how has reduced, considerably, the amount of labour needed in agricultural farming. This mechanisation or automation has made the

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7 Chand, M., Employment and Migration in Allahabad City, Calcutta 1969, p.106.

8 Clarke, J.I., Population Geography, London, 1965, p.125.

9 Kirk, Europe's Population, 1946, p.149.

farm workers jobless. Therefore the workers have to move towards the urban centres for employment. The process of modernisation also tends to change the system of forming from its subsistence nature to a business enterprise and the primary interest of farmers ultimately get shifted from the crop producing capability of the land to the cash yielding efficiency of their agricultural enterprise. This brings about accumulation of wealth in certain rural communities or families, the members of which feel themselves free to move to the cities to start more profitable enterprises. Besides the contrast between such families and poorly paid farm workers is sharper and for them the difference of income between agriculture and urban industries becomes a powerful stimulant for migration.

Rural to urban migration also take place in a socialist state but under different circumstances. Sometimes in collective farming, some agricultural labourers are made free, so they move to the areas of plentiful land or to non-agricultural employments.

Though we may not consider that the highest propensity to migrate is, as a rule, associated with the poorest agricultural districts, as in many a country the main areas of rural to urban migration are found to be

those where per capita output of agricultural labour was relatively high. But these are strong evidences to show that there exists to be a high positive correlation between poverty and propensity to migrate. Moore has pointed out that poverty may be an effective cause for movement from non-agricultural to industrial employments.[10] In the late twentieth century, an era of unprecedented affluence, hunger is still the common lot of much of humanity. For this hungry group, the quality of life is influenced more by the lack of food than by any other single factor. In countries containing one-third or more of the world's people, average food intake is today below the minimum required for normal growth and activity.[11]

In India, it is no doubt that the industrialisation took place rapidly after the World War II. Due to the industrialisation in different part of our country the employment opportunities in urban and industrially progressive societies grow faster than those in agricultural areas. As per capita real income rises the demand for manufactured goods and services produced by urban workers increase faster

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10 Quoted in Garnier, J.B., op. cit.,pp.212-214.

11 Brown, L.R., In the Human Interest, New Delhi, 1974, pp.101-105.

than that for farm products. It shows that economic opportunities grow faster in urban areas than in rural areas, while the natural increase of population is generally lower in urban areas than in rural areas. A shift of population towards cities and non-agricultural occupations may, therefore, be expected, even if these were no differences in earnings and standards of living. The effect of these underlying economic tendencies is commonly accentuated by higher earnings in non-agricultural industries, by a superior standard of life in the cities and also by the prospects of more stable, continuous employment in cities than can be obtained in rural areas.

Migration to and from the cities is related to the fluctuations in the business cycle. During the periods of prosperity, the labour demand increases, which is satisfied partly by an increased inflow of migrants from rural areas. On the other hand during the period of depression and unemployment in industrial areas, the cityward migration is checked, if the unemployment is very severe, the net movement may even be turned in the direction of rural areas.[12]

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12 Cassel, The Theory of Social Economy, 1939, pp.566-575.

Thomas found that the greatest migratory losses in agricultural areas and the greatest migratory gains in the cities occurred in the years of prosperity. On the other hand a minimum of rural losses and urban gains was found during depression periods.[13] From the different studies it has been found that the gross migration is more closer to the relation between business cycles and internal migration than net migration. During business upswings, the increased in-migration to cities is accompanied by a partially balancing increase in out-migration. During the downswings both in-migration and out-migration usually decrease, the former one is faster than the latter. The explanation lies in fact that out-migration is largely a function of in-migration. During upswings some earlier in-migrants to cities return home as economic activity increases there, and some new in-migrants being unable to secure jobs, return to the country or go to the other cities. During depressions, migration both to and from cities is checked by the general lack of work opportunities, lack of money to pay costs of transportation, by the residential clauses often found in unemployment compensation provisions.

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13 Thomas, Social and Economic Aspects, 1941, p.516.

On the basis of internal migration in the United States Pierson pointed out that in case of an economic event i.e. hard times, the main group of moves will be middle class people with saving, who are threatened by a relative loss of status or increase of wants. On the other hand in good times, rising middle class people move who are more energetic, ambitious and hopeful.[14] In case study of a village in India in the environs of Madras one-fourth of the families of village of Dusi were Brahmins but these represented two-fifths of the emigrants. This shows that it is not always the poorest and the most depressed classes who migrate but on the contrary those who have the ability to adopt and convert themselves to new circumstances, also move.[15] Like the state of business cycle the cost of transportation and the availability of transportation facilities, also, exert its influence upon both the 'pull' and the 'push' of internal migration. It has been marked that during the last hundred years, internal migration has increased due to the improvement in transportation facilities.

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14 Pierson, J.W., The Moving American, New York, 1973, p.171.

15 Garnier, J.B., op. cit.

DEMOGRAPHIC FACTORS

This factor has great role in the distribution of economic opportunities and affectsthem by differential rate of population increase in different parts of a country. In the countries where the rural natural increase is particularly high in comparision with the urban, as it generally remains, the rural exodus tends to be great. In India the demographic upsurge of recent years has created an unbearable overpopulation of rural areas, and may have, therefore, quitted the villages, notably the Brahmins, who are the ground landlords.[16] There are many other demographic factors which are responsible for internal migration. It takes place on the occasion of marriage between persons who are living in different areas, e.g., where it is a Hindu custom to take a bride from another village, marriage migration makes up a large proportion of all internal migration. In the same country, the custom of the woman returning to her parents to bear her first child is also responsible for much migration.

SOCIAL AND CULTURAL FACTORS

A little less significant than the economic factors stimulating migration are social factors. Internal migration

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16 Ibid., pp.214-215.

sometimes creates many social and cultural problems in different communities and regions. Mahesh Chand has given some social factors provoking migration on the basis of his observation and study of Allahabad City. He considered the lack of educational facilities, lack of civic amenities, family differences and social and class tension as the main social provoking factors of migration.[17] Under the heading of social factors, Bogue has pointed out the maladjustment to the community and social rejection.[18] It is also observed that migration has a communal character in developing countries.

In India prevailing social customs in different societies and communities like the movement of bride after marriage to bridegroom's place of residence, village exogamy, to accompany migrant husband and the movement of females to their parents place of residence at the time of their first confinement and sometimes also in subsequent confinements (especially among Hindus), have greatly increased the volume of short-range migration. Kingsley Davis estimated that probably more than seventeen per cent of the inter-district migrants (short-range movement) in India are marriage

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17 Chand, M., op. cit., pp.106-108.

18 Bogue, D.J., op. cit., pp.125-126.

motivated.[19] In addition, the other social factors that push the people for out-migration in India are communal riots, untouchability and feeling of high and low caste. At present the groupism is in great practice nearly in all villages, which leads to frequent group fightings, and as a result the people of weaker parties are forced to give up the village and migrate to other areas for peace and safety of their life and property. Contrary to this, early marriage, caste system, linguistic diversity (specially in south India), illiteracy, joint family tradition have tended to act as discouragements to migration and are mostly considered as the social causes of meagre internal migration in India.

In addition, the other important social factors stimulating migration are the availability of information, the cultural contact, crimes, to escape punishment, to desire for social uplift, the educational facilities and government policies. The information availability and cultural contact regulate the volume and direction of migration. When some people of a community migrate to another community/or area, they send back accurate information at the

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19 Davis, K., op. cit., p.122.

place of origin about the facilities available at the place of destination and methods to overcome the hurdles of intervening obstacles. As a result a phenomena of chain migration takes place and it increases the volume of migration. Sometimes, the ambition to obtain a respectable position in the society also stimulates the people to move out. Similarly, in certain cases, the policies of a countries government framed on some socio-economic and political considerations may also encourage or discourage movements of its population. For example, under article 19 (1)(e) of the Indian constitution it has been provided that every Indian citizen has the fundamental right 'to reside and settle in any part of the territory of India', but later some restrictions have been imposed for permanent settlement in Jammu and Kashmir, and Assam provinces due to some social and political interests in the states, while a great stress has been given to inhibit the command area of 'Rajasthan canal' in Rajasthan. Similarly the government of China has attempted to redistribute its population by reclaiming new agricultural lands in the west and north (Heilung-Kiang Province) and by establishing industries in the western half of the country.[20]

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20 Orleans, L.A., 'Population Redistribution in China in Population Geography — A Reader, edited by G.J. Demko, et al., New York, 1970, pp.215-216.

Migration is also considered as an instrument of cultural diffusion, social and communal integration.[21] Each migration stream brings some good norms to the receiving community. The migrant group and the receiving community are adjusted to each other by a slow process of assimilation, which mostly takes a generation or more. In the process of assimilation and absorption, the civilisation gets enriched due to many contributions from various kinds of folks, and a new type of culture springs up in the receiving community where internal migration takes place in great volume among different regions and areas, the resulting cultural diffusion may retard the feelings of regionalism, casteism and communalism.

GEOGRAPHICAL FACTORS

The geographical factors play a dominant role in stimulating migration currents particularly in ancient period when man was completely a slave of nature, but the development of science and technology has reduced the effects of physical factors on migration. There are events as volcanic erruptions, earthquakes, epidemics, famines, floods which may still be seen forcing the people out of their native places in certain areas. There are a number of other geographical factors which affect internal migration.

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21 Bogue, D.J., Internal Migration in The Study of Population, p.487.

They are natural barriers, size of the country and the climate. In many countries, natural barriers stand as an important hindrances to internal migration. Mountain chains are obvious barriers which deflect the movements on a large scale but usually they can be pierced across the passes by the hard work of people. But overall we should stress the effects of natural barriers, routes and regions on migration streams.[22]

The size of the country is an important factor influencing the internal migration. Large countries encourage internal migrations. On the whole the variety of economic opportunities in a large country is probably greater than in a small country and internal migration may assume a comparatively greater volume in the former than in the latter. It has been observed that internal migration is a more important alternative to migration in small countries than in large countries.

Climate is one of the major factors, responsible for internal migration. It has been observed that the people suffering from any chronic disease leave their

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22 Clarke, J.I., op. cit., pp.125-126.

residence permanently or semi-permanently and settled in some other places where the climate is good for the health. In Uttar Pradesh there are many people who are living in Nainital and Almora due to healthy climate, but they are not born in these districts. On the contrary, it has also been seen that people leave their residence where the climate is good enough and arrived in the climate rather bad to their health, in search of minerals.

THEORIES OF MIGRATION

Theories of migration discuss the different factors governing migratory movements. Such factors may be social, economic, political and even psychological. Therefore migration is studied not only by sociologists but also by social psychologists, economists and political scientists.

Migration may occur as a search for an opportunity to improve one's lot in life. On the other hand, it is in correct to assume that the flow of migration between places is a simple calculus of the comparative advantages and disadvantages of the place of origin and potential places of destination alone. As mentioned later on, there an intervening obstacles to migration. Demographers say that migration is a function of A and B. This means that there

two
are/variables namely A and B, which are responsible for the frequency of migrants in which the number of migrants (M) varies directly with A and inversely with the square of B and may be expressed mathematically as $M = \frac{A}{B^2}$. Such a specific functional relation is more valuable (because more precise) than a general association and after rests on a prior general formulation.

Some major theories which have been formulated on the basis of micro level studies are summarised. In this respect, the credit must be given to E.G. Ravenstein who made beginning after presenting his celeberated paper on 'the laws of migration' in 1885 and revised paper on same title in 1889. This paper contained seven laws or generalisations developed on the basis of the study of migration. His laws are summarised as below:

1. <u>Migration and Distance</u>

(a) The great body of our migrants moves only short distance. The number of migrants to a community or area decreases progressively as the distance from the place increases.

(b) Long distance migration takes place preferably for the great centres of commerce and industry.

2. Migration by Stages

(a) Migration takes place in the form of currents.

(b) The city absorbs migrants by drawing most heavily on its immediate hinterland. The gaps left by the migrants in the rural areas are filled up by migration from other remote parts of the country.

(c) The process of dispersion is the inverse of that of absorption, and exhibits similar features.

3. Stream and Counter Stream

Each main current of migration produces a compensating weaker counter-current.

4. Urban- Rural Differences in Propensity to Migrate

The rural people are more migratory than that of urban.

5. Predominance of Females Among Short-distance Migrants

Females out number males in short distance migration.

6. Technology and Migration

The migration generally tends to increase with an increase in the level of technology, for exaple with the

increase in means of communication locomotion and a development in industries and commerce.

7. Dominance of the Economic Motive

Under this law it appears that the economic motives have always played a dominant role influencing the magnitude of migration.

However both of his papers were criticised by many eminent critics as N.A. Humphreys, Stephen Bourne etc. The most serious and less devastating criticism was made by Stephen Bourne. He remarked "that although Ravenstein had spoken of 'Laws of Migration' he had not formulated them in such a categorical order that they could be criticised". However, the principle feature of Ravenstein's theory is that it is basically principle oriented and the generalisations are such that are repeatable in all situations and at all times. Pryor found much validity of these laws in his observation of Malaysia and other countries.[23]

Huntington, E., in nineteen twenties, became interested in the biological and cultural selectivity of

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23 Pryor, R.J., 'Laws of Migration, The Experience of Malaysia and other Countries', Geographica, Vol.V, 1969, pp.65-76.

migration. Sorokin, a great sociologist paid some attention to spatial mobility and to its effects both on society and individual. The social effects, he identified, are i) under some conditions mobility faciliates a better distribution of individuals; ii) it favours prosperity and social progress upto a saturation point; iii) the continuity of the culture complex is shortened; iv) mobility favours automisation and v) it favours increase of individualism, followed by a vague cosmopolitanism and collectivism.

Sofar as the effect on individual behaviour and psychology is concerned, that he thought a) behaviour becomes more plastic and versatile; b) there is decrease of narrow mindness and occupationmal idiosyncrasies; c) but increase of mental strain and nervousness; d) mobility faciliates inventions and discoveries; e) also intellectual life; f) but also mental deseases; g) mobility encourages superficiality and decreases sensitiveness; h) it generates skepticism, cynicism and aversion to theory and encourages anti-intellectualism; i) it diminishes intimacy with men or with things increases loveliness, restlessness, sensual, pleasures and suicide and j) it facilitates the disintegration of morals.

Rudolf Heberle, a young German scholar, after a study in the United States wrote an interesting book on the

American habit of movement and on some of its social, political, and personal effects. He pointed out that mobility discouraged spritual and artistic life, decreased community spirit, made patriarchal family life almost non-existent and drove Americans into lodges or clubs.

Hagerstrand, in 1967, formulated the theory of spatial interaction which is simplified model of residential mobility. Having assumed that population is distributed in discrete locations on a finite plane, he asserts that each one of the locations is a node that is interconnected with other locations through links, and there is a great movement of population between all nodes, where precise nature of the distribution of individual's movements remain unique. This pattern of individual's movements is denoted as 'personal information field'. Hagerstrand also assumes that the decisions regarding movement are made probabilistically because the pattern of personal information field is not likely to remain the same for each person and for each purpose. It will also differ for the same person with time. He observed that regularities exit in the movements of certain subgroups or segments of population. Thus, by synthesising the personal information field of a number of people for a given span of time, he developed the idea of 'mean information field'. Hagerstrand also observed that

the frequency of contacts was higher for physically adjacent nodes — a theme very well consistent with distance — decay function.

Michael P. Todaro in 1976 has demonstrated that it is not the real income and employment differences but the perceived income and employment opportunities that motivate migrants. The probability of successfully obtaining a job in the city, costs of moving may reduce the probabilities of migration. The model has been tested in a number of countries and it performs fairly well with both aggregate census and survey data.

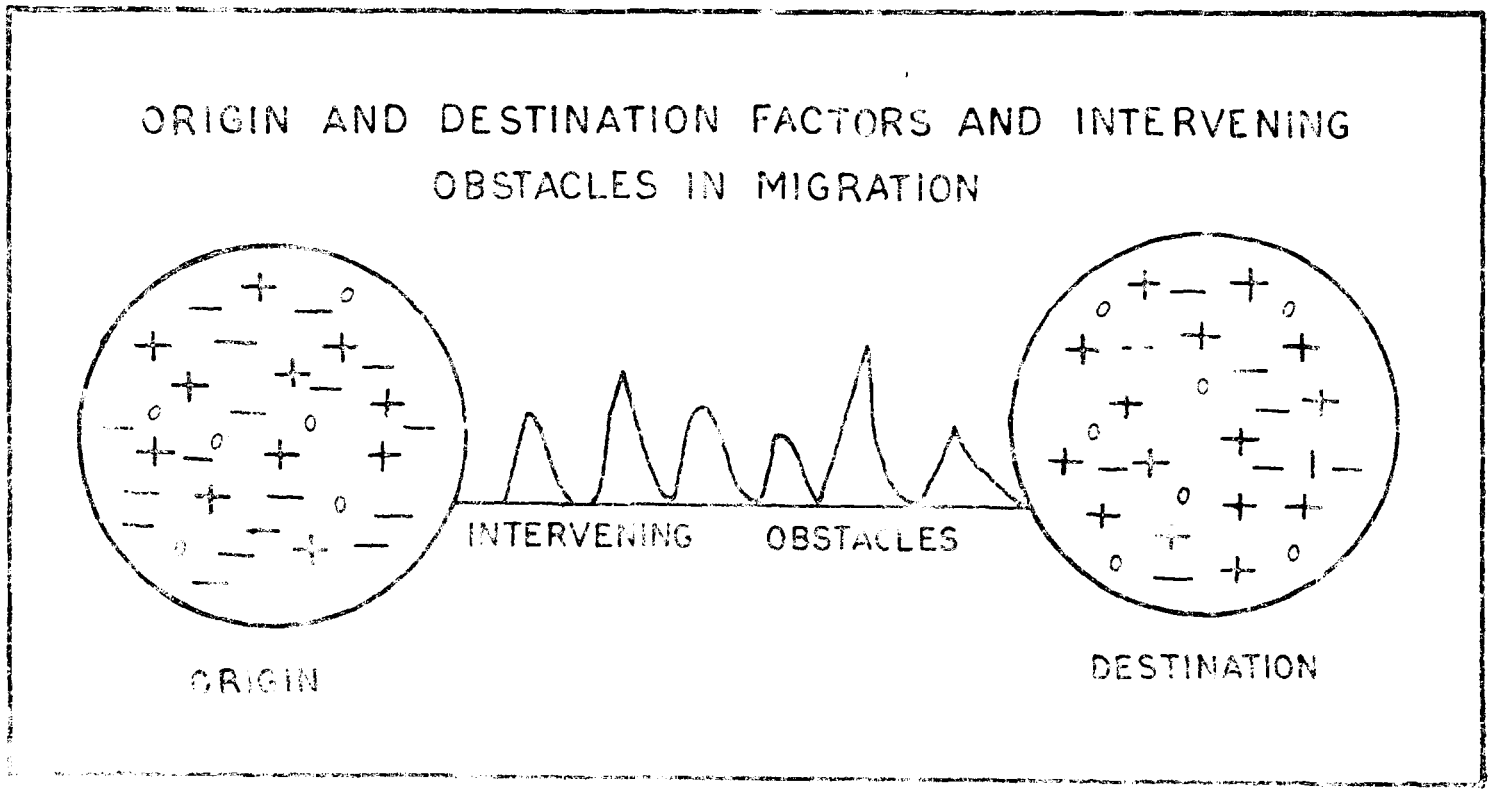
Now of the above cited works could be regarded as comprehensive and major attempts for the formulation of a regorous theory of human migrations encompassing all the significant variables of place, distance, economy, society and behaviour. Thus after Ravenstein, it was only Everett S.Lee who stands unique for his postulation of comprehensive laws of migratiom. He modified and improved upon Ravenstein's laws. In place of seven laws he developed nineteen principles in which he explained the phenomena of human migration. He called the theory as 'The Push Pull Intervening Obstacles Theory of Migration'.

Everett S. Lee published a paper on 'A Theory of Migration' in 1966 in which he has attempted to highlight push-pull and intervening obstacles in the process of migration. Lee mentions that the factors which provok the human migration may be summarised under four headings:

1. Factors associated with the place of origin,
2. Factors associated with the place of destination,
3. Intervening obstacles and
4. Personal factors.

FACTORS ASSOCIATED WITH THE AREA OF ORIGIN AND DESTINATION

In each area there are several factors which motivated migration outside the area and there are others which tend to repel. These are shown in the diagram as + (plus) and - (minus) signs. There are others shown as 0 (zero) to which the people are essentially in different. Some of these factors affect most people in the same way, while the others affect different people in different ways The set of pluses and minuses at both origin and destination is differently defined for every migrant or prospective migrant. There are important differences between the factors associated with the area of origin and those associated with the area of destination. The knowledge of area of destination is not exact because some of the advantages and


ORIGIN AND DESTINATION FACTORS AND INTERVENING
OBSTACLES IN MIGRATION
INTERVENING OBSTACLES
ORIGIN
DESTINATION

FIG·2

disadvantages of an area can only be felt by living there. Thus, Lee states that there is always an element of ignorance or mystry about the area of destination and there is some uncertainty with regard to the reception of a migrant in a new area.

An other important difference between the factors associated with the area of origin and area of destination is related to stages of the life difficulties after reaching and living in a new place, present a negative factor at the place of arrival.

INTERVENING OBSTACLES

The intervening obstacles intervene migration. Therefore they must be overcome before migration takes place. The most important intervening obstacles are distance and transportation. These have been considerably reduced in modern time due to technological advance.

"Between every two points there stands a set of intervening obstacles which may be slight in some cases and greater in others. The most significant in these obstacles is the distance. The other obstacles are the physical barriers, immigration laws, cost of transportation etc. Different people are affected in different ways by the same

set of obstacles. The effect of these obstacles may also be felt by the empediments with which the migrant is encumbered i.e. children and other dependents may stand as an intervening obstacles. In some cases it may be least while greater in others".[24]

This hypothesis of obstacles has long been recognized, but has been expressed less directly Zipf defined the obstacles as a simple inverse function of distance and proposed that the attractiveness of two places for the flow of population between them be expressed by the equation.[25]

$$\text{attraction} = \frac{PoPd}{D}$$

where,

Po = population at the place of origin

Pd = population at the place of destination

and D = distance seperating origin and destination.

Stouffer considers the problem of obstacles in a positive way. According to his postulated hypothesis of 'intervening opportunities', the flow of migrants between

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24 Bogue, D.J., op. cit., pp.754-756.

25 Zipf, G.K., 'The $P_1 P_2/D$ Hypothesis': In the Intercity Movement of Persons, American Sociological Review, Vol.11, 1946, pp.677-686.

two places is inversely related to the number of opportunities for migrants to satisfy their needs (employment, housing etc.) that intervene between them. The theory tells that migration is costly and mobile person will cease moving as soon as he encounters an appropriate opportunity.

PERSONAL FACTORS

These are the most important factors determining migration, since they determine internal motivation. In fact it is not the factors associated with the place of origin or destination but rather the individual's perception of them which determine actual migration. Personal factors change according to individual differences. While some persons are more resistant to the change of residence, others are eager for such a change. Therefore, migration is not rational and any generalisation concerning it must allow exceptions. Sometimes migration may not be the result of one's own decision. For example, wives accompany their husbands, children accompany their parents. Since migration in such cases is a result of other person's migration and a process in sequence, therefore it is known as sequential migration.

Migration also depend upon the personal sensitiveness, intelligence and awareness of the conditions and personal

decisions. There are persons who are resistent to change-change of residence as well as other changes and there are persons who welcome change for the sake of change only. So, the decision to migrate is never rational. We may also expect a considerable proportion of total migrations to be due to transient emotions, mental disorder and accidental occurances.

Lee has organised his laws, of migration under three major heads, namely, volume of migration, streams and counter streams, and characteristics of migration.[26]

Volume of Migration

1. The volume of migration within a given territory varies with the degree of areas included in that territory. If a migration is occurred due to positive and negative factors at origin and destination, then a high degree of diversity among areas should result in high levels of migration, as we have seen in countries which are being opened up for settlement, e.g. the U.S.A. in ninteenth century. Under such conditions those persons move who have a dissatisfaction. When very great attractions spring up

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26 Lee, Everett S., A Theory of Migration in Readings on Population, edited by Heer, D.M., pp.186-189.

suddenly, e.g. opening up of Indian territories for white settlements, above mentioned persons have a golden opportunities to attract to them.

2. The volume of migration varies with the diversity of the people.

Where there is a great similarity among the people whether in terms of race or ethnic origin, of education, of income, or tradition — we may expect a lesser amount of migration than where there is great diversity. A diversity of people implies that the social status of some groups will become elevated above those of others. The discrimination among racial or ethnic groups causes the diversity of people.

3. The volume of migration is related to the difficulty of surmounting the intervening variables. The considerations of the difficulty of intervening obstacles, is the most important factor, in taking the decision for migration.

4. The volume of migration varies with fluctuations in the economy.

During periods of economic expansion, new business and industries are created at a rapid rate and old industries

begin to recruit workmen from afar. These opportunities do not have their even distribution, so, parts of the country remain in a state of relative stagnation. The contrast between the positive factors at origin and destination occurs at a higher level and negative factors at origin seem more vanishing. During depressions, some of the newly created business fail and others cease to expand and a levelling of opportunities occurs.

5. Unless severe checks are imposed, both the volume and rate of migration vary with the state of progress in a country or area.

The volume of migration tends to increase with time due to (a) increasing diversity of areas, (b) increasing diversity of people and (c) diminution of intervening obstacles. The diversity of areas increases due to (a) industrialisation, (b) westernisation and (c) the explicit or implicit goals of most countries.

Other factors of increasing volume of migration are both, the increasing differences among the people and view taken of these differences. In a primitive or agricultural society, specialization is limited and the development of differences among the people tends to be discouraged while in an advancing society just opposite is the position.

Increasing technology plays an important role in minimizing intervening obstacles. Communication becomes easier and transportation becomes cheaper than the average income, improving technology should, alone, result in an increase in the volume of migration.

Migration itself increases the migration. A person who has once migrated will find no difficult to migrate again in comparison with the person who has never migrated before.

6. In the developed country, the differences between areas are increased by industrial development and the differences among people by education and on the other hand the intervening obstacles are lessened by improving and by political design. So, there occurs heavy immigration to developed countries where this is permitted and within such countries a high rate of internal migration occurs. On the other hand in least developed countries, we find a largely immobile population.

Streams and Counter Streams

1. Migration tends to take place largely within well defined streams. Migrants proceed along well defined routes towards highly specific destination. This is true

in part because, opportunities tend to be highly localized and in part because migrants usually established routes of transportation. The earlier migrants overcome a set of intervening obstacles lessening the difficulty of the passage for later migrants and due to it pathways are created.

2. For every major migration stream, a counter stream also develops. A counter stream is established due to some reasons. The existence of a migration stream creates contacts between origin and destination and the equisition of new attributes at destination, i.e. either skills or wealth, often makes it possible to return to the origin on advantageous term. Migrants become aware of the opportunities at origin which were not previously exploited, or they may use their contacts in the new area to set up business in the old.

3. The efficiency of the stream (ratio of stream to counter stream or the net redistribution of population affected by the opposite flow) is high if the major factors in the development of a migration stream are minus factors at origin. In order to clear this point we may produce an example of the movements of the persons from Bangladesh to other neighbouring countries, recently.

4. The efficiency of the stream and the counter stream of migration tends to be low if the place of origin and the place of destination are similar.

5. The efficiency of migration streams will be high if the intervening obstacles are great. The migrants who overcome a considerable set of intervening obstacles, do so for compelling reasons and such migrations are not undertaken lightly. It is also felt that the set of obstacles in stream and counter stream is the same. So the return migrants have to face twice difficulty of one side.

6. The efficiency of a migration stream varies with economic conditions, being high in prosperous times and low in times of depression. During the time of prosperity, the usual areas of destination i.e. the great centres of commerce and industry expand rapidly and relatively few persons (either return migrants or others) make the counter move. In times of depression many migrants return to the area of origin and others move towards the comparatively "safer" non-industrialized areas. In extreme instances, stream and counter stream may be reversed.

Donald J. Bogue mentions that Empirical research has supported the validity of each of the following generalizations about the migration streams.

1. The rate of in-migration to a central point from each of several other points lying at a distance tends to vary inversely with the distance (Zipf, 1949).

2. The rate of out-migration from a central point to each of several other central points lying at a distance tends to vary inversely with the distance (Zipf, 1949).

3. The amount of interchange between any two areas is directly proportional to the product of the population of the two areas and inversely proportional to the distance between them (Zipf, 1949).

4. Rates of net migration between two areas tend to be directly proportional to differences in level of living and inversely proportional to the distance between them. (Magnus and Mc.Namara, 1943, Folger, 1953).

5. If the two areas are in different economic regions the relationship between distance and number of migrants may be different from the relationship within an economically integrated area (Folger, 1953).

6. The number of persons going to a given distance is directly proportional to the number of opportunities at that distance and inversely proportional to the number of intervening opportunities (Stouffer, 1940).

7. The areas of low level of living tend to be areas of net out-migration, while areas of high level of living tend to be areas of net in-migration (Goodrich, 1936).

8. The rate of migration between two communities varies with the type of community of origin and destination, the direction of migration, and the age and other characteristics of migrant (Bogue and Hagood, 1953).

9. The rate of in-migration and out-migration in any community tend not to be independent of each other. A high rate of in-migration tends to be accompanied by a high rate of out migration (Bogue, Shryock and Hoermann, 1957).

10. A very high proportion of all migration streams is a flow between communities of the same type (urban to urban, farm to farm etc.). In modern industrialised nations the urban flow may be larger than all other flows combined (Bogue, Shryock and Hoermann, 1957).

11. Migration streams tend to avoid areas of high unemployment and to flow with greatest velocity toward areas of low unemployment (Bogue, Shryock and Hoermann, 1957).

12. The size, direction and net effect of migration streams are not invariable, either in time or in place. Instead they are highly sensitive to the social and economic

changes that are occuring in the various communities of origin and destination (Bogue, Shryock and Hoermann, 1957).

13. The regional pattern of net migration tends to remain constant for several decades, persumably reflecting the continued action of a given set of redistributive forces (Shryock and Eldridge, 1947).

Bogue has also mentioned the limitations of above generalisations as: i) these do not specify as to what the level or rate of movement will be under any given set of conditions. They only specify how a given batch of migrants (number unspecified) will be apportioned among possible destinations. Such formulas have analytical value in explaining the patterns of past migration and cannot estimate the amount of migration for future, at any given place. ii) Some of them are inflexible because they specify fixed relationships. iii) These hypothesis are not mutually exclusive. We cannot find the facts of migration, expressed in such a way, by which we could make the comparative tests in it. iv) Each of these formulations is admittedly incomplete. Under test they account for not more than 35 to 50 per cent of the observed variance in migration streams among areas.

Characteristics of Migration

1. Migration is selective - There are differences in the responses of different persons to the sets of plus and minus factors at origin and destination because they have the different abilities to overcome the intervening sets of obstacles and they differ from each other in terms of the personal factors. So, the migration is selective. The kind of selection varies, being positive in some streams and negative in others.

2. Migrants responding primarily to plus factors at destination tend to be positively selective.

These persons, actually, have no necessity to migrate, but do so, because they perceive opportunities from afar and they can weigh advantages and disadvantages at origin and destination.

3. Migrants responding primarily to minus factors at origin tend to be negatively selected.

It has been observed that the economically and socially failed persons are against the factors at origin. Though there are conditions in many places which push out the highly creative, it is more likely to be the uneducated or the disturbed who are forced to migrate i.e. the political expulsions.

4. When all migrants are considered together, selection for migration tends to be bimodal.

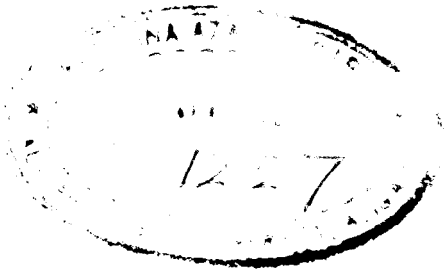
For any given origin, some of the migrants who leave, respond primarily to plus factors at destination and therefore tend to be positively selected while others are responding to minus factors at destination and therefore tend to be negatively selected.

5. The degree of positive selection increases with the difficulties posed by the intervening obstacles.

The greater the intervening obstacles, the greater the chance for positive selection of destination.

6. The heightened propensity to migrate at certain stages of life cycle is important in the selection of migrants.

The persons who enter the labour force or get married, tend to migrate from their parental home, while the persons who are divorced or widowed, also tend to move away. Because of the happenings of some of these events at quite well defined ages, they are important in shaping the curve of age selection and in establishing other types of selection - marital status or size of the family.



7. The characteristics of migrants tend to be intermediate between the characteristics of the population of the place of origin and of the population of the place of destination.

People having different characteristics react differently to the balance of plus and minus factors at origin and at destination. Even before they leave, migrants tend to have taken on some of the characteristics of the population at the destination, but they can never completely lose some of the characteristics which they share with the population at origin. It is because they are already to some degree like the population at the destination that they find certain positive factors there and it is because they are unlike the population at origin that certain negative factors provoke them for migration.

CHAPTER IV

DATA BASE AND METHODOLOGY

The principal sources of data concerning migration are census, sample surveys and population registers. So far as the collection of correct data for migration in India and in all other developing countries is concerned, it is very difficult due to lack of direct statistical records. Migration figures are to derive from census data which give information on place of birth and are concerned only with the total amount of movement. A person who moves several times but returns to his original residence during intercensal period will not be recorded as a migrant. On the other hand a migrant who dies before the census does not get recorded in migration data. Thus a census underestimates the migration data.[1] Although census results contain errors of different importance they all appear to be equal reliable and accurate because the census results are not stated in round numbers but seem to be given very exactly, "to one man". The methods of measuring internal migration have been classified as direct and indirect methods.

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1 Zelinsky, Wilbur, et al., (Eds.), Geography and a Crowding World, Oxford University Press, New York, 1970, pp.251-252.

THE DIRECT MEASURES FOR ESTIMATING INTERNAL MIGRATION

The direct measures for estimating migration include place of birth, duration of residence, place of last residence and place of residence at a fix prior data.[2]

Place of Birth

Place of birth gives information about migrants and non-migrants. Migrants are the persons enumerated in a place which is not their place of birth. Non-migrants are the persons enumerated in the place where they are born. These terms are generally applicable to states. For example in India census data show place of birth. It shows population classified by state of birth and state of enumeration. It gives data concerning life-time in-migrants by state of origin, out-migrants by state of destination and net life-streams of migration, in different states of India.

However, the place of birth as a measure of life internal migration suffers from many disadvantages as mentioned below:

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2 Sharma, R.N. and Sharma, R.K., Demography and Population Problems, 1985, p.195.

i) Since answers to the census questionnaires are generally given by the head of the family, so the possibilities of errors are there.

ii) There may be deliberate misreporting for some political reasons.

iii) There may be a tendency to report a better known place as the place of birth in stead of actual place of birth.

iv) Error due to frequently changing boundaries of a state due to political reasons of which the respondent may be unaware.

v) Sometimes some social practice may introduce artificial bias about the information on the place of birth.

Duration of Residence

Sometimes a question about duration of residence is asked in a census. On the basis of the answers to this question are distinguished; all who have ever migrated, those born outside the areas of enumeration and those born in the area of enumeration. These data fill a serious gap in the place of birth approach. It is the basis of distinction between migrants and non-migrants. It gives information on the timing of the last move of life-time migrants.

In 1961 Census tabulation for India, migrants were classified into the following categories:

Less than one year, one to five year, six to ten years, eleven to fifteen years, sixteen and over and period not stated.

The above mentioned method, however, suffers from the following limitations:

i) Usually the head of the family gives the information. He may not know exactly the duration of residence of each person in the family.

ii) The percentages of those for whom information on duration of residence is not available are higher for females.

iii) The data on duration of residence are affected by the digit preference tendency of the respondents. For example while some persons have a tendency to report duration as 3, 7, 11, 13 etc. while others may report as 10, 15, 20, 25 etc., this recall lapse on the part of respondents results in a large measure of in accuracy of the data.

Place of Last Residence

The question concerning place of last residence fills up the gaps of place of birth data. This information may be classified into two categories: (a) Migrants whose place of last residence and the place of present residence are different and (b) non-migrants who have never moved outside the area of their place of birth. These data may be used to measure migration in exactly the same way as data on the place of birth are used. These data however, are more useful for an analysis of migration when cross classified with the data on the duration of residence. It reflects a direct movement from the place of origin to the place of destination.

Place of Residence at a Fixed Prior Date

In some census questionnaires a question is asked about the place of residence at a fixed prior date. The answers to these questions are important since migration interval in it is given by a comparison of residence at two definite points at time. A migrant is defined as a person whose residence at the census date differs from his residence at the specified prior date. This data is utilised for computation of prior migration rate. For example, in a study of rural migration patterns in south Maharashtra,

conducted by international institute for population studies, Bombay, in 1965, a question was asked about the place of residence five years earlier, i.e. between 1961 and 1966. The data gathered showed that the migration rate was 8.7 per cent for females and only 3.5 per cent for males.[3] The measurement of migration on the basis of residence at a fixed prior date is simple and therefore useful and satisfactory. However, the possibility of inaccuracy due to recall lapse cannot be ruled out. The data cannot be used properly if the reference period for the question is not the same as the inter-censal period.

INDIRECT MEASURES FOR NET INTERNAL MIGRATION

The measures of migration discussed so far are direct. However, more indirect measures are used for estimating net internal migration particularly during the two successive census operations. The population may grow due to increase or due to migration. The difference between the actual population count at the end of the period and the expected population growth gives the estimates of

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3 Narain, V. et al., Rural Migration Patterns in Southern Maharasthra, p.45.

the net change due to migration. The most important methods for arriving at such estimation are — the Vital Statistics Method, The Survival Ratio Method and the Place of Birth Method.[4]

The Vital Statistics Method

The vital statistics method of measuring net inter-censal migration consist of taking the difference between the natural and total gain or loss which a population experiences between two censuses. This difference may be taken as an estimate of net migration that is the balance between the total number of persons that entered the community during the inter-censal period and the total number of persons that depart from it, during the same interval of time. The total population change that occurs in a community during the interval between two censuses consist of two major components of natural increase (total births minus total deaths) and net-migration (total in-migration minus total out-migration). Net migration represents total population change minus total natural increase. So where two continuous reliable censuses are available (from which total population change can be obtained) and where a reliable count of births

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4 Bogue, D.J., Principles of Demography, New York, 1969, p.758.

and deaths during the inter-censal period is maintained (from which natural increase can be obtained), a reliable estimate of net migration may be obtained simply by substracting total natural increase for inter-censal period from the total inter-censal change in population.[5] In order to understand this method we may express it as below:

$$P_t - (P_o + n) = \pm m$$

where,

P_o = total population at the previous census.

P_t = total population at the latest census.

n = natural increase of population i.e. (b-d).

b = total birth during inter-censal period.

d = total deaths during inter-censal period.

+m = number of in-migrants.

-m = number of out-migrants.

Hence, Bogue quotes that where reliable statistics of birth and death are available, this method can be used. To estimate the net migration from the data for two successive censuses, he has introduced the book keeping equation i.e.

$$P_t = P_o + B - D + M$$

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5 Bogue, D.J., Internal Migration in The Study of Population edited by Hauser, Philip, M. and Duncan Otis Dudley, Chicago, 1959, p.492.

where

P_t = population at the end of an inter-censal period (last census);

P_o = population at the beginning of inter-censal period (previous census);

D = number of deaths during the inter-censal period;

B = number of births during the inter-censal period;

M = net migration during the inter-censal period.

In order to find out the net-migration this equation can be rearranged as:

$$M = (P_t - P_o) - (B - D)$$

In other words, net-migration is obtained by substracting reproductive population change from total change.

Although this procedure is very simple, but there are certain limitations in it which lessen its usefulness.

(i) This method provides absolutely no information about the origin or destination of migrants or stream of migrants.

(ii) Migration figures obtained through this method pertain to net migration only volume of in-and out-migrants is not possible to obtain seperately.

(iii) In case of net- in-migration it is not possible to ascertain that it is the result of in-migration above or is due to the excess of in-migrants over out-migrants.

(iv) Similarly in case of net out-migration it is not identifiable whether it is solely due to exodus or is the result of the excess of out-migrants over in-migrants.

(v) The usefulness of this method becomes further limited in Indian situation because of the lack of adequate and detailed vital statistics for smaller administrative units.

Survival Ratio Method of Measuring Net Migration

This method, as is clear by the name, is based upon the use of estimates of probability of survival. It requires information about age distribution by sex, as enumerated in each area in two successive census operations. The differences between the enumerated population at the end of the second census and the expected survival of the population at the time gives an estimate of net internal migration. Sometimes net migration may be estimated by computing the survival ratios of two consecutive census operations. This is particularly in the case where appropriate life tables are not available, and also where the use of available life tables is forbidden due to one reason or another. This method cannot be used for the estimation of net migration for persons born during the inter-censal period. The data obtained by it about

migration are better than those achieved by computing life table survivorship probabilities.[6]

According to Clarke, this method estimates the proportion of the population which should be expected to survive upto the next census and determines the difference between this expected surviving population and the actual population.[7] In other words this method estimates how many people from a preceding census would be alive and living in the same place at the time of net census if there were no migration. It substracts this expected number of survivors from the actual census count and the difference is accepted as an estimate of the net number of migrants. The estimate of survivors is obtained by a 'survival ratio' which estimates the proportion of persons of that age who will survive to be counted at the net census. In this estimate allowance must be made for the fact that the survivors grow older during the inter-censal period and at the net census are counted in different age groups than at the previous census.[8]

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6 Sharma, R.N. and Sharma, P.K., op. cit., p.197.

7 Clarke, John I., Population Geography, London, 1965, p.125.

8 Bogue, D.J., Principles of Demography, op. cit., p.759.

If two censuses are taken exactly Z years apart, the population that is age X at the first census will be age X+Z at the second. However the number of people counted at the older age at the second census will be fewer in number even in the absense of migration because of mortality during the inter-censal period. Each age group may be looked upon, as a set of real cohorts born in specified years that pass through time together. If none of initial groups were to move to an other community during the period and if a count could be maintained or estimated of the number of the deaths that occurred to the cohort that was age X at the earlier census, it would be possible to know how many non-migratory persons should be expected to be alive and living in the same community at the date of the final census. The difference between this expected number and the number actually connected at the latest census may be accepted as a measure of net migration if other errors are not present. Sometimes the number of deaths are unknown but can be estimated by applying a survival ratio which after making necessary allowance for the number of migrants coming in or going out during the inter-censal interval. The difference between these expected surviving population and the actual population at the latest census is an estimated of net migration of a specific age group during the inter-censal

period. If the expected population is smaller than the census count, the community is assumed to have experienced net in-migration of the amount indicated by the difference. If the expected population is larger than the census count, the difference is taken as a measure of net out-migration.[9]

According to K.C. Zachariah, it may be symbolically expressed as:[10]

$$M_i = P_i^2 - \frac{P_c^2}{P_c^1} P_i^1$$

or $$M_i = P_i^2 - SP_i^1$$

where,

P_i^1 refers to the population the i the state in a particular age group at the first census and P_i^2 the corresponding population ten years older at the next census, P_c^1 and P_c^2 refers to the corresponding population in the country and S indicates census survival ratio and is equal to $\frac{P_c^2}{P_c^1}$ for the particular age group.

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9 Bogue, D.J., 'Internal Migration' op. cit., pp.492-493.

10 Zakariah, K.C., A Historical Study of Internal Migration in the Indian Sub-Continent (1901-1931), Demographic Training and Research Centre, Bombay, 1964, pp.136-37.

As a matter of fact, this method has certain superiorities over other methods. It's main advantages are: I) The method because it does not require the vital statistics, is getting highly useful in situation where the vital statistics are not available. For instance the survival ratio method can be used to estimate the net migration of the rural farm population or the migration of males and females from small communities where births and deaths are not reported seperately from these groups.[11] II) Only census data are needed in this procedure. III) This method yields an estimate of net-migration by age group. IV) It is also useful for estimating net migration between earlier censuses when vital statistics were not available. V) Computations are relatively easy. However there are certain limitations in this method as:

(i) In this simplest form, given above this method fails to make an estimate for the children born during the inter-censal period. However, with certain special modification in the basic procedure this defect is possible to be removed.

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11 Bogue, D.J., Internal Migration, op. cit., p.493.

(ii) It is also not possible to identify migration streams with this method as there is no provision in the formulation to help determine the origin and destination of migrants.

(iii) As the age figures are involved in the computation of migration, the errors of age reporting are transmitted directly to the estimated figures of migration.

Mis-statement of age is extremely high in Indian age reporting. It is mainly due to illiteracy and ignorance of Indian people. They do not know their actual ages and report their ages in accurately. Ages which multiplies of five are highly preferred, specially at higher ages, between ages ending in zero and five, the former is more preferred. Because of this the five years age groups starting with a zero are generally over counted and those beginning with five uncounted as consequence.[12]

Place of Birth Method

Though information about the place of origin and destination of particular groups of migrants can be provided only by direct migration statistics, however, for countries

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12 Zachariah, K.C., op. cit., p.38.

where place of birth are available certain indirect measures of migration streams can be made. Now, we will examine the third indirect method of measuring internal migration which seems to be more important and suitable than the two for our purposes.

Almost all the censuses of the world record the state or province of birth by comparing the place of birth with the residence of the person at present i.e. at the time of enumeration, it is possible to seperate the population into migrants and non-migrants.[13] Place of birth statistics are derived from the responses to a census question like, "In which state was he born"? The census records show the present residence (place at which enumerated) for each individual. By cross tabulating place of birth by of present residence, it is possible to identify seperately all persons who are not residing at their places of birth at a given census. The persons who were born at a certain place, may be redistributed according to their present place of residence. In this way it is possible to construct streams of migration, i.e. flow of migrants from a common origin to a common destination. However, in this stream construction

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13 Bogue, D.J., Principles of Demography, op. cit., p.759.

one has to work within the confines of the migration defining boundaries implicitly adopted in the place of birth data published by census department. In most cases the national censuses of India have used the province, state or other major administration unit for classifying place of birth. Consequently the streams of migration that can be seperately identified and measured are only the major inter-provincial, interstate or inter-regional streams. The net gain or loss through an inter-change of migrants between any two areas may be obtained by subtracting the out-migrating stream from the in-migrating stream. Thus 'birth-residence index' is the difference between the reported number of surviving native persons who have moved out of the specified area since they were born and the total number of native persons who have moved into the specified area since they were born.[14]

As far as the accuracy of this method is concerned it may be considered to be relatively high in the sense of that it is easier for a common respondent to answer the question about his place of birth than to answer that about his age as required in the previous method. He may name

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14 Bogue, D.J., 'Internal Migration', op. cit., p.494.

his place of birth with more confidence because it is generally expected that every one knows his native state or district. Though the theoretical possibility of mis-statement about the place of birth may not be completely ruledout, neverthless, the changes of the commission of this error are reasonably expected to be ignorably meagre.

K.C. Zachariah has expressed the estimation of migration from place of birth data in a simple and clear manner.[15] According to him:

If, I = number of persons enumerated in a state and born elswhere in the country.

O = number of persons born in the state and enumerated outside (elswhere) in the country.

Then he defines I as life-time in-migrants to the state and O as life-time out-migrants from the state. The difference between these two numbers (I-O=M) is known as 'birth-residence index' or 'life-time net-migrants'. Generally the latter term is used. All these numbers I, O and M are estimates of migration, i.e. in, out and net-migration but they do not refer to migration in any defined

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15 Zachariah, K.C., op. cit., pp.44-45.

period. So, these can be termed as 'stock data'. We get the 'flow data' from it, for an inter-censal period. It may be expressed as:

$$(I_2 - O_2) - (I_1 - O_1)$$

where,

I_1, O_1 and M_1 are the in-, out- and net lifetime migrants, say, in 1901 of a given state and I_2, O_2 and M_2 the corresponding numbers in 1911. Then the difference $(I_2 - O_2) - (I_1 - O_1)$ may be taken as an estimate of net-migrants for this state during the decade 1901-1911.

It is an usual method to find out the inter-censal net migration from place of birth data. He expresses the same formula in a slightly different form as under:

$I_2 - I_1$ = net migrants during the decade to the state among persons born outside the state.

$O_1 - O_2$ = net migrants during the decade from the state among persons born in the state and the sum:

$(I_2-I_1) + (O_1-O_2)$ = (total) net migrants during the decade to the state.

This form has an advantage that it gives two components of net migration, i.e. net migration among persons

born in a state and net migration among persons born elsewhere.

We have considered above, the migration between one state and all other states. The same formula can be applied for the estimation of migration between any two states of the country, but the assumptions involved are more restrictive, as it will be seen later on.

In the above method, though there are certain limitation in it, but some of the draw backs can be avoided. These draw backs can be traced to errors in the basic data and to the effect of mortality.

(i) Errors in Basic Data - It is clear that if the I's and O's are in error, then any estimate obtained from them will be in error unless it is cancelled out during the process of estimation. Thus if I and O are in error, life-time in- or out migrants will be in error. Therefore, life time net migrants need not be simply wrong because the I and O are not correct. If the errors in I and O are equal in magnitude and direction, they will cancel out in net migration estimates. Similarly, inter-censal net migration need not in be error simply because I_1, I_2 and O_1, O_2 are not correct. If error in I_1 equal that in O_1 and that in I_2 equals that in O_2, not only net life-time migrants but also

net inter-censal migrants will be free from any error. Even if net life-time migration estimates are in error, there is the possibility that the inter-censal migration estimate may be accurate. A necessary and sufficient condition for inter-censal migration to be free from error on this accounts is that the error in (I_2-I_1) is equal to and of the same sign as that in (O_2-O_1).

(ii) Mis-Statement of Place of Birth - The census enumerators collect their data generally from the head of the household and not directly from each member. He may be familiar with the birth place of his sons, daughters and wife/wives perhaps, but may not be aware of birth place of all the persons who are staying with him on census night, he may not be sure about birth place of daughter-in-law and other relatives. It happens generally that if a person lives in a place for a long time, that place will be reported as his place of birth. So, we can find out such intercensal mis-statement of place of birth in a number of instances. The net effect of these errors on our data is reduced by the fact that we are dealing with large areal units, consequently mis-statements involving smaller units tend to cancel out.

The large number of boundary changes,is also a factor of inaccuracies of place of birth data. All people are not aware of boundary changes and through ignorance they may tell some other state, at the place of that state where they were born, e.g. in 1901 Bihar was a part of Bengal Province. Those who were born in Bihar before partition from Bengal and migrated to some areas within the country might therefore report their state of birth as Bengal. However, this error may be easily rectified by knowledgable persons using the data as side by side with place of birth the age of the respondent is also available in census tables.

On the whole we may take the view that net errors caused by mis-statement of place of birth are not very significant and for the purpose of estimating the net migration, the census tables on place of birth may be taken as accurate enough.

So far as the accuracy is concerned, there is also a problem of adequacy. In India, there are some special customs that make the place of birth of a person were incidental.A high percentage of Indian women return to their father's house, to bear the first child and often the second, and subsequent children. The custom of taking a wife from another village which may be in another district or state, give rise to some superiors migration as measured from place of birth data.

The mode of census enumeration also influences the place of data, e.g. in Indian censuses prior to 1941, no attempt was made to find a person's normal place of residence, people were enumerated at the place they were found on the census night. As a result the place of enumeration may have nothing to do with the usual place of residence. Thus place of birth data may omit some real migrants while at the same time it may include an applicable number of casual visitors as migrants.

(iii) Underenumeration - In every census there is some degree of underenumeration which is more among children under 5 years and among young adults in the age group 19-24. There is no evidence that age specific underenumeration among migrants differs from that among non-migrants. If migrants, who predominated at ages 15-29 are greatly underenumerated in the censuses, this will lead to serious general underenumeration at ages 15-29. The post-enumeration survey after 1951 shows that underenumeration is greatest in urban areas. So we may imagine greater underenumeration among migrants. On the other hand because the percentage of children among migrants is less than in general population, migrants underenumeration may be less. It is difficult to judge whether on balance the migrants are underenumerated more or less than the general population. Only we may say

that in the estimation of intercensal net migration some of the errors are cancelled out. But the estimates made for the past have shown that net migration estimates from place of birth data have lesser errors in basic data than the errors of those from survival ratio or other methods.

(iv) Errors due to Mortality - Generally it has been observed that the migration estimates from place of birth data are affected due to deaths among migrants. In order to understand the way in which the mortality influences migration estimates, let us write the components of I_2 and O_2 and compare them with I_1 and O_1. Let us consider first I, i.e. <u>persons born outside the state</u> of enumeration.

I_2 = I_1 - deaths among I_1 during the decade: (I-S) I_1
+ net migrants during the decade to the state among persons born elsewhere: (MG)
- deaths in the state during the decade among persons born elsewhere and migrating to the state during the decade: (d_1 I)
+ deaths outside the state during the decade among I_1: (d_o I)

Therefore,

$$I_2 = I_1 - (I-S)\ I_1 + M_1 + (d_oI - d_1\ I)$$

Where S is the 10 years survival ratio, applicable to the in-migrants to the state I_1.

Therefore,

$$(I_2 - SI_1) = M + (d_0 I - d_1 I)$$

Thus the difference $I_2 - I_1$ as an estimate of net migration among persons born elsewhere is in error by the amount:

$$-(I-S)\ I_1 + (d_0\ I - d_1\ I)$$

Though $d_0 I$ and $d_1 I$ refer to deaths among migrants of the decade, $(I-S)\ I_1$ refers to total deaths among persons who moved into the state at any time before the first census. This together with factor $d_1 I$ constitutes the total deaths among persons who migrated into the state at any time before the second census and the error from this source may therefore be quite significant.

Now we will consider the other group namely, <u>persons born in the state</u>.

According to above analysis we find that

$O_2 = O_1$ - deaths among O_1 during the decade: $(I-S)\ O$

- net migrants to state during the decade among persons born in the state: (MO)

- deaths outside the state during the decade among persons born in the state who out-migrated during decade: (d_0 0)

+ deaths among 0_1 inside the state during decade: ($d_1$0)

Thus, $0_2 - S0_1 = - M_0 + (d_1 0 - d_0 0)$

The error in (0_2-0_1) as an estimate of net migration among persons born in the state is, - (I-S) 0_1 + ($d_1$0 - $d_0$0)

= - deaths outside the state during the decade among persons born in the state who out-migrated at any time,

+ deaths within the state during the decade among persons who were enumerated outside at the time of the first census.

Putting the two components together, we get:

$$(I_2-I_1) - (0_2-0_1) = - (I-S)\ I_1 + (d_0 I - d_1 I) + (I-S)\ 0_1 - (d_1 0 - d_0 0) + MI + MO$$

The correct estimate of net migration is $M_I + M_0$, the other factors being the error. If we make allowance for the mortality among I_1 and 0_1 the estimate will still be in error by the other two terms, i.e. (d_0I- d_1I) - ($d_1$0-$d_0$0). We may summarise our analysis and conclude that:

(i) If the death rates are high, migration estimates obtained without mortality correction may be in error by a significant extent.

(ii) Even if deaths among migrants in the beginning of the decade are taken care of migration estimates will still be in error by the difference between the deaths among in migrants and those among out-migrants during the decade.

In case of migration between two states, the estimates have an additional source of error. We may take, e.g. three significant areal units, the two states under consideration and all other states. We call the two states A and B and combination of all other states as C. We denote by I, persons born in A and enumerated in B and by O, persons born in B and enumerated in A.

We may then write:

$$I_2 = I_1 - (I-S)\, I_1$$

+ net migration to B from A among persons born in A.
+ net migration to B from C among persons A.
+ deaths outside B among migrants from B to A and C during the decade: $d_o I$
- deaths inside B among in-migrants from A and C to B during the decade: $d_1 I$.

Thus, (I_2-I_1) as an estimate of net-migration during the decade from A to B is in error by the factors:

(i) (Due to mortality): $-(I-S)\ I_1 + (d_0 I - d_1 I)$

(ii) Due to migration): net migrant between B and C.

Similarly,

$$O_2 = O_1 - (I-S)\ O_1$$

+ net migration to A from B among persons born in B.
+ net migration to A from C among persons born in B.
+ the death outside A among out-migrants from A to B and C during the decade.
- deaths inside A among in-migrants from B and C to A during the decade.

Thus $(I_2-I_1) - (O_2-O_1)$

$= (I-S)\ I + (I-S)\ O_1$

+ net migration to B from A among persons born in A.
- net migration to A from B among persons born in B.
+ net migration to B from C among persons born in A.

- net migration to A from C among persons born in B.
+ deaths outside B among migrants from B to A and C during the decade.
- deaths outside A among out-migrants from A to B and C during the decade.
+ deaths inside A among in-migrants from B and C to A during the decade.
- deaths inside B among in-migrants from A and C to B during the decade.

Net migration to B from A is actually, migration from A to B among persons who were enumerated in A in the first census.

- migration from B to A among people who were enumerated in B in the first census.
  It follows that in addition to the error caused by mortality, there is an other source of error, namely,

  net migration to B from C among persons born in A.
- net migration to A from C among persons born in B.
- net migration to B from A among persons born in C and enumerated in A in the first census.
+ net migration to A from B among persons born in C and enumerated in B in the first census.

(v) Other Sources of Errors - Actually the place of birth data are stock data rather than flow data. Therefore, we may find some other errors in migration estimates, in addition to the inaccuracies caused by errors in basic data and by mortality. The census data gives the movement of time and cannot identify the multiple and circular movements. If a person moves from a state and returns to it in the same decade, either directly or after moving on to some other state, he will appear in the census as a non-migrants. In the same way, if he has moved from state A to state B and then to state C in a single decade, he will appear as a case of direct movement from state A to state C. If a group of people born in A and enumerated in B in the first census moved directly to C during the decade, the place of birth data will indicate a case of return migration from B to A and a fresh movement from A to C. However, this error will not arise, if net migration between a state and the rest of the country is considered. Therefore, estimates of migration between two states as obtained from place of birth data should be interpreted with caution. The indicated streams of inter-state migration may in some cases be different from the actual streams.

Removal of Different Types of Errors

In connection with removal of errors, Zachariah has mentioned that very little can be done to minimize errors in basic data, Similarly the nature of data prevents our making estimates of multiple and circular movements. The major source of error is the effect of mortality and in this case some corrections are possible.

Mortality Correction

So far as mortality rate in India is concerned, it is very high. Therefore, the inter-censal migration estimates obtained from place of birth data will be highly misleading, unless corrected for mortality. The error from this source is not connected with only the deaths among persons who moved during an inter-censal period, but also with deaths of those who moved at any previous time. On the whole the amount of error depends on the size of net lifetime migration at the beginning of the decade, the higher the lifetime migration, the higher the error. Mortality correction is absolutely necessary if the lifetime migration at the beginning of the decade is significant and the mortality level is high.

CHAPTER V

A REVIEW OF AVAILABLE LITERATURE

India is the second highly populated country of the world. It has its population over 700 million at present. So far as the migration of its inhabitants is concerned, it is generally assumed that the population of India is comparatively immobile. Census report of India 1931 reveals that only 3.6 per cent of the population lived in provinces or states other than those where they were born. Granting that the proportional movement was small, the absolute numbers involved in the internal movements have been large. Near about 12 million people were enumerated outside the province or state of birth. Hence, a study of internal migration in the Indian sub-continent is study of the movement of millions of people who have, for one reason or the other, changed the community of residence during their course of lives.

There has been a lot of work on migration in various institutions in India and abroad. There are only few researchers who have given general information considering only three realms of the world, namely, industrialised, developing and underdeveloped countries. But most of the work

have been done on a single country. Since the last few decades tremendous works dealing with various aspects of migration have been done in most of the countries.

Prior to 1941, there has been only a little work on migration in India, specially on internal migration. For the period of 1931 an important analysis was made by Kingsley Davis in his book, 'The Population of India and Pakistan', but he has discussed the problem only in a very broad terms, and deals with the pattern of migration between various regions of India and Pakistan.

The interest of planning authorities in India has lead to a number of studies of recent interstate and rural to urban migrations in India, and since 1961, census of India and the national sample survey have both included a direct question pertaining to internal migration. Hence, in India, the study of internal migration is receiving more and more attention. The eminent scholars, such as K.C. Zachariah, Ashish Bose and S.Chandra Shekhar have developed the idea that in the study of population, special attention is to be paid on internal migrations. Besides, the professional demographers, the scholars of other associated desciplines have also done considerable work on internal migration in India and the states. In order to

make an assessment of the nature of works done in different areas of other countries of the world on internal migration cannot be neglected. Consequently, a brief critical survey of published and unpublished literature on the internal migration in India as well as in other countries of the world is attempted.

A study by B.N. Sinha (1958) deals with 'Population Analysis of Orissa' in which the author has considered the migration as the main cause of change in economy in Orissa. Sinha also gives the detailed account of geographical changes, density of population, birth, death and migration with its causes, marital status and economic significance in the state.

P.Dayal (1959) published an article on 'Population Growth and Rural-Urban Migration in India'. In this article he has discussed the rural and urban population and growth rate in India. The author points out that the growth rate is very much higher in towns than in the villages due to the large scale of rural to urban migration. The article is completely based on the census report.

Ujagir Singh (1959) has presented a detailed study on 'The Origin and Growth of Kanpur'. The growth of

population is caused by migration. In this article an special attention is paid to the natural increase of population and percentage of in and out born persons among the KAVAL towns. The author considers migration as the main cause for rapid growth of population among these towns during 1901-1951.

G.S. Gosal (1961) in his article 'Internal Migration in India - A Regional Analysis' elaborates the place of birth method for measuring internal migration with its limitations. In his discussion he asserts that mostly the migrations in the country are short run, though large cities have attracted migrations from far and wide. In general, there is an inverse relation between the number of in-migrants to these cities and the distance of migration. In connection with the internal migration in future, he paints out that it is bound to increase the view of the growing diversification of economic activity. The author accepts that the increasing degree of industrialisation, and urbanisation, the expanding commercial activities, the improving means of transport, the extension of irrigation to arid and semi-arid areas under the various plans of economic development, the spread of education will play a major role in accelerating the mobility of Indian population.

B.K. Roy published an article on 'Migration Pattern in Uttar Pradesh - Geographical Analysis' in 1973. In this article an attempt is made to analyse some aspects of migration data available in Census of 1911 and 1921 for four districts, namely, Jaunpur, Varanasi, Pratapgarh and Ballia, U.P. to understand the quantum of migration. Having a perspective of the evaluation of census data, an attempt has been made to present some analysis of migration patterns of seven selected settlements on the basis of data collected by the author to high light sex, age, and duration, social setup and net movements of migrants in general.

Anthony C. Petto and Sloyd D. Bender (1974) published a paper on 'Out-Migration: Responsiveness to Local Economic Conditions in the Ozarks'. In order to provide insight into the dynamics of labour mobility and its implications for low-income regions, this paper provides empirical evidence from the Ozarks region on the following two questions. Firstly do economic conditions influence movements of people in low income rural regions? Secondly, does out-migration benefit the moves from such regions? Regression models are applied to net migration and gross out-migration data, and the results are used in an analytical treatment of the second question.

Brinley Thomas (1954) in his study of 'Migration and Economic Growth: A Study of Great Britain and Atlantic Economy' has made a careful statistical analysis of trans-Atlantic migration and its relationship to economic growth, especially prior to 1913. He has analysed elaborately the flow of migrants from Europe to the new world (mainly North America) during the period 1830-1913 and examines its determinants. Thomas concludes that the 'pull' of economic opportunity in new world was the dominant force influencing migration flows and the man power expelled from Europe exercises a direct formative influence on technical conditions of production and habits of consumption and thereby set in motion a 'pull' for further immigrants.

Allan Rodgers (1970) presented an article 'Migration and Industrial Development: The Southern Italian Experience' which is associated with a discussion about the relationship between the migration in southern Italy and the evolving pattern of industrialisation and economic development in that region. The paper is mainly concerned with the migration in southern Italy during 1951-68. The necessary data on which the paper is based are obtained from two sources, consists of anagraphical records covering inter-commune movements and the second comprises the reports of

the various population censuses, particularly those comparing place of birth with place of residence for various enumeration dates.

A study made by Norman D. Humphrey (1943) on 'The Migration and Settlement of Detroit Mexicans' has examined the reasons of the migration of Mexican to the USA. His main thrust of causal analysis may be summarised as the migration is chiefly due to the pull of economic advantages and the push of political instability for Mexican peasants. The author has also discussed, in detail, the effects of economy on Mexican migration to Detroit as well as the consequences of this migration in the country of destination.

A study by Lawrence A. Brown, John Odland and Regional G.Golledge on 'Migration, Functional Distance and Urban Hierarchy' published in 1970 which presents a brief discussion on migration hierarchy. A migration hierarchy may be viewed as either local or systemwise: local if only the direct links (or flows) between two places are considered, systemwise if both direct and indirect links (or flows) are considered. In their paper the authors seek to identify a systemwise hierarchy among one hundred largest SMSA's in the US. For the purpose of the analysis

of the main theme the authors have taken each of the hundred SMSA's as a node so that the migration between ordered pairs of these nodes constitute the inter-nodal flows and these flows indicate the functional linkages or functional distances between ordered pairs of nodes.

In an article 'Emigration from Southern Tunisia' John I. Clarke (1957) has tried to find out the causes and results of European migration to French North Africa and the union of South Africa. He, firstly, quotes that the European migrants preferred to go there mainly due to temperate climatic conditions which have been conducive to their settlement. Secondly, migration performed a great role in the fusion of the two groups of people and in contrast, between the two economy, namely, the advanced exporting economy of the Europeans and the backward and dependent economy of the natives. And lastly he mentions that this migration has helped in the process of urbanisation in the receiving country.

A study by R.Lawton (1964) on 'Problems of Population Mobility in Contemporary Britain' deals with the growth of working population in London and other major

provincial cities. It reports that its rate of growth far exceed which infact is a strong indication of considerable larger number of in-migrants than that of the resident population. These migrants arise due to the continuing inhability of many regions to provide enough jobs to cope with the natural growth of population. Infact the population mobility is affected by the shortage of housing at present.

Sir Charles Close (1927) in his paper 'Population and migration' made a statistical study with special reference to the English speaking people. In his paper he has taken the countries such as the United States, Great Britain, Scotland, Australia and New Zealand, Newfoundland and Southern Rhodesia, seperately and gave a detailed account of growth of population followed by the statistical accounts of the total immigration and emigration in each of these nations during 18th, 19th and mid 20th century.

The study of 'France and her Immigration Problems' by William Gault and Sydney Herbert (1927) highlights the causes, influences and effects of immigrations into France. The authors after identifying various groups of immigrant have attempted an analysis of their occupations and the

steps taken for better French immigration policy. In support of their analysis they have presented both an absolute and a comparative statistical account of the immigrants in various decades. Their study is concerned with the period 1901-1925. They have drawn the conclusion that the problem of France for the future is to develop a practical policy of immigration on national lines to secure her own nationals against the tendency for alien labour to lower the standard of living and to protect the immigrants against exploitation and maltreatment. Hence, in France what is needed is not a temporary and auxilliary community but a domiciled and settled one which will become part of the French nation and will give France that internal security and stability which will lead her to prosperity and safety.

In an article by R.Lawton (1958) about the 'Population Movements in the West Midlands' during 1841-61, the author has discussed various types and patterns of population movement, in the west midlands during mid 19th century. The author has made the main emphasis on the movement of the persons in the west midlands due to the urban growth and rural depopulation. He found that the population movement was closely related with economic trends in the area.

R.H. Osborne (1964) presents a study on 'Changes in Regional Distribution of Population in Great Britain' in which he discusses the growth and shift of population in Great Britain during 1921-61. The author highlights that the redistribution of population is affected greatly by the migration of people. The loss of population from Scotland is due to migration to England and to a disproportionate contribution to the large volume of oversea migration from Britain which was partly offset by Irish immigration.

Georgia Mortara (1956) pointed out the most significant feature of 'The Development and Structure of Brazil's Population' indicating the development of population, comparative increase of different colour groups, rural and urban population, internal and international migration.

An attempt was made by Kurt B. Mayer (1968) on 'Population composition' relating to various social and biological categories in which age, sex, and occupational compositions have been compared from region to region in terms of birth, death and migration.

The article on 'A note on a Perennial Question in Migration Analysis' (Celia A. Morgan 1974) deals with the establishment of a positive relationship between

in-and out-migration, with the help of the migration analysis and gross migration. The author mentions that the areas of relatively large and small growth are appeared as irregular. The characteristics of these anomalous areas probably contain the keys to the determinants of migration patterns which cause population redistribution.

Campbell Gibson's assessment (1975) of 'The Contribution of Immigration to United States Population Growth' is based on the absolute figures of immigrants, rate of natural increase and the proportion of immigrants for each decade of the period from 1790-1970 in the US. He has pointed out that there is very low natural increase of population in the US, and most of the population increase is due to immigration.

Michael P. Todaro (1971) in his article 'Policies Affecting Rural-Urban Migration in Africa' points out that the rapid rural to urban migration rates, common in sub-Saharan Africa continue despite rising unemployment in cities with various negative consequences for development. In the opinion of these authors, the birth-place matrix may be used to identify consistencies in the census data themselves as well as furthering the study of the spatial pattern of movement in Uganda.

A.C.M. Van Westen and M.C. Klute (1986) in their paper on from Bamako with Love: A Case Study of Migrants and their Remittances' have pointed out the conditions of recent internal migration in Mali. Attention has mainly focussed on the capital Bamako where the migrants have come from every part of the country. Since 1970, political and ecological factors have encouraged increasing numbers of people to move to the capital. Painting out the remittances from Bamako, they have concluded that the flow of remittances between migrants and the home area is variable and seems to depend up on four factors - the length of stay in Bamako, the intention to return home, the nature of home ties and the state of the home economy.

John A. Kirchner (1980) in case study of Tucuman, Argentina has described the seasonal and periodic movements of campesinos (rural dwellers) in search of wage labour as one of the noteworthy forms of spatial mobility in Argentina and Latin America. The author has devoted his main attention on seasonal migration to and from the major sugarcane growing state of Tucuman in Argentina. He has also enumerated the main causes of seasonal movements such as economic, social, political and environmental. Two basic types of seasonal movements are identified — the simple 'pendular' movements and the 'radial' movements.

In each case, the seasonal progression of activities is important which refers to the movements taking place during the slack period or periods of lesser demand on the home farm. The author has also pointed out that the seasonal movements have always played a role in permanent migration. So far as the strength of the seasonal movements is concerned it is, however, depend on the availability of work. In Tucuman increasing mechanisation has considerably affected the future employment prospects of the Zafra (sugar harvest).

Richard Bedford (1981), in his paper, has tried to discuss some explanatory generalisations which seem to account for observed trends in movement and redistribution of population in a region of small islands in eastern Fiji. According to author, there are two dimensions of shift from autonomy and self sufficiency to deep dependence on external market forces and decision makers. The first has its origin in the spread of a uniform export crop (coconuts), which has transformed highly specialized systems of resource exploitation on small islands and has degraded a number of indigenous skills and practices. The second dimension relates to radical changes in

expectations over what constitutes a satisfactory standard of living, a desirable occupation, a stimulating residential environment, a suitable mix of accessible services and facilities, Reliance on imported foods and goods has intensified with rising aspirations for material wealth and alien life styles.

CHAPTER VI

THE STUDY AREA AND PLAN OF THE PROPOSED WORK

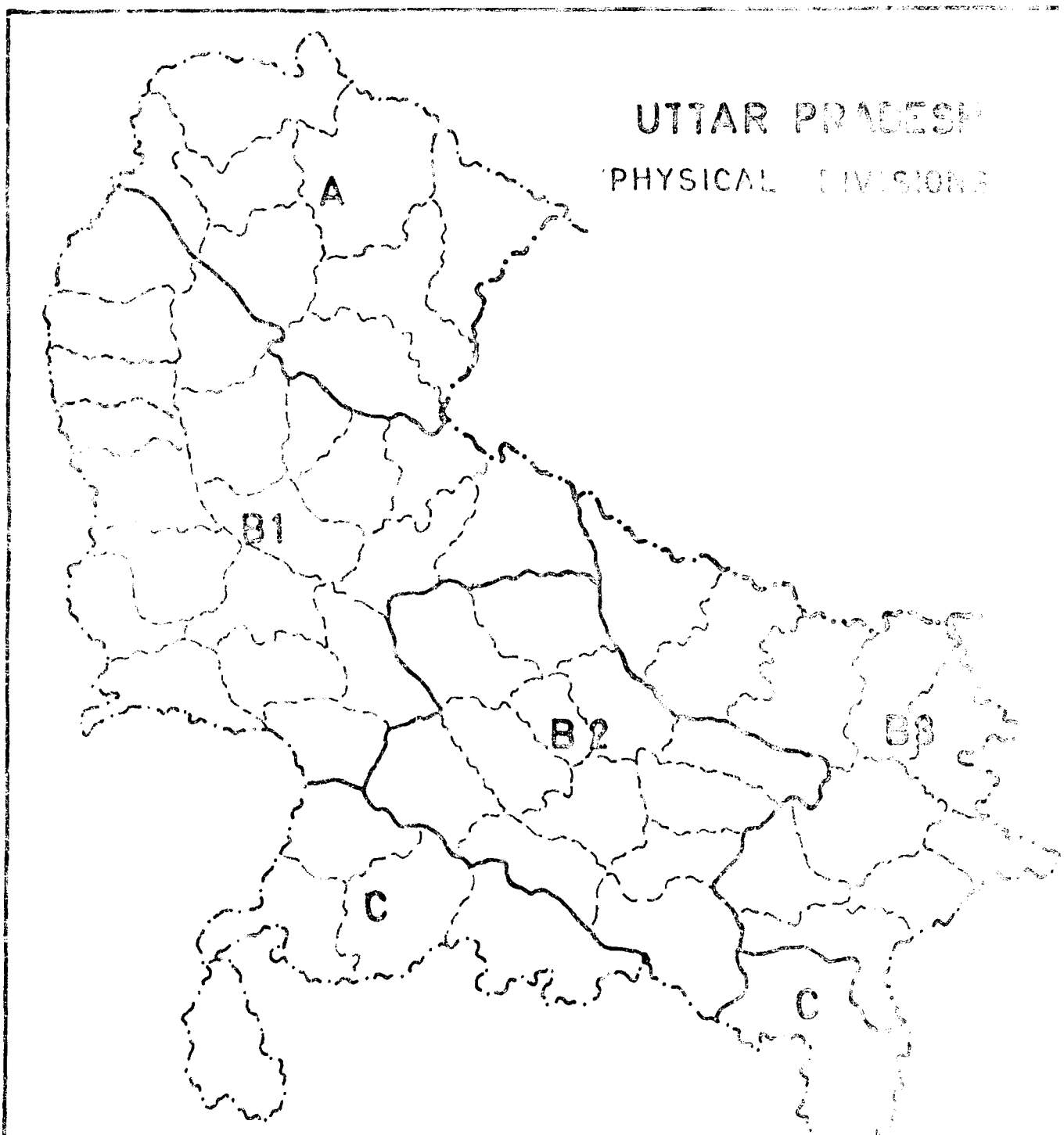
Uttar Pradesh is one of the bigest states of India with its higest population of 110 million according to census of India 1981. It is located in the northern India. It lies between the parallels of $23^{o}52'$, and $31^{o}28'$ north latitude and meridians of $77^{o}04'$ and $84^{o}38'$ east longitude. Its extension from north to south and east to west is approximately 850 km and 750 km respectively. It occupies an area of 294,411 sq. km which is approximately 9 per cent of the total area of the country. Hence it is the fourth biggest state of India from the view point of area.

PHYSICAL DIVISIONS

Physically and geologically the state can be divided into three distinct regions, namely, the Himalayan Region, the Ganga plain and the southern hills and plateau region.

The Himalayan Region

It is northern most region of the state which comprises of eight districts, namely, Uttar Kashi, Chamoli,



A. HIMALAYAN REGION

B1. GANGA WEST PLAIN

B2. GANGA CENTRAL PLAIN

B3. GANGA EAST PLAIN

C. HILLS AND PLATEAU

Tehri-Garhwal, Garhwal, Pithoragarh, Almora, Naini Tal and Dehra Dun. The height of this region is ranging 300 m to 6000 m above the sea level. The region covers one-sixth of the total area of the state. The northern portion of this region is called the greater Himalayan Zone with some famous peaks and the origin places of the famous rivers the Ganga and the Yamuna. Both these historic rivers rise in this region from the glaciers of Gangotri (5611 m) and Jamnotri (6315 m) respectively.

The lower Himalayas lie to the south of the greater Himalayas and have a number of valleys among which Dune Valley is also included. This zone of moderate height and very sparse population is decorated by a number of beautiful hill stations such as Mussoorie, Chakrata, Naini Tal, Rani Khet, Almora etc.

The sub-Himalayan zone, or the Siwaliks, runs from northwest to southeast and passes through the northern part of Saharanpur district, the southern part of the districts of Dehra Dun and Garhwal and the middle part of Naini Tal.

Ganga Plain

It covers about two-thirds of the area of Uttar Pradesh and is traversed by the Ganga and its tributaries.

The northern part of the Ganga plain which borders on the Himalayas and extends from Saharanpur to Deoria district is known as the Bhabhar and Tarai and has distinct features of its own. The Ganga plain is mostly an alluvial tract of pleistocene and recent deposits of clay and sand. This vast plain is almost a flat tract sloping with an imperceptible gradient of about 21 cm per km towards east and southeast. This region is very fertile for cultivation.

Plateau Region

The plateau region, lying in the southern most part of the state, is the oldest and most stable land mass which has the rocks of diversified origins. The eastern part of the plateau region belongs to the Vindhyan system, whereas the western part comprises of rocky highland plateau. The whole region is mainly composed of five districts of Jhansi, Jalaun, Hamirpur, Banda and Mirzapur. This region lies at the height of about 300 m and the land is not suitable for agriculture but it is fairly rich in mineral resources.

DRAINAGE

The drainage of Uttar Pradesh comprises a number of rivers and their tributaries. The Ganga is the chief

river of the state and rest are its tributaries. The Yamuna is the biggest tributary. Both the rivers flow from west to east. Other perennial tributaries, which flow from west to east are Ram Ganga, Sai, Gomti and Rapti. All these perennial rivers except Gomti originate from the Himalayas, where as Gomti rises from the Tarai region in the district of Pilibhit. The other group of tributaries is of those which emerge from the peninsula and join Yamuna. These rivers are Chambal, Betwa and Ken.

The rivers emerging from the Himalayan are most active than the rivers of the Vindhyan region. The flow of these rivers is from northeast to southwest in the upper mountanous region but reaching in plain they first flow from north to south thereafter they change their courses from northwest to southeast.

SOILS

The soils exert its influence indirectly upon the demographic personality of the state. In the Himalayan region real loam, brown forest, podesol and meadow soils are found in the northern part of the region, whereas in the southern part of the region pebbly and porous soils are found which vary from clayey loam to sandy loam and are rich in organic matter. The soils of the Ganga plain

are mostly of the alluvial type which consist of older alluvium (Bangar) and newer alluvium (Khadar). The soils are deep and very fertile in the western section of the plain. Central part of the plain is composed of loam or sandy loam. The northern area of central plain has the soils are of loam or sandy loam variety while in rest of the area they are mostly sandy loam is character. Bangar, Bhat and Bhur soils are found in the eastern plain. Patches of usar or Reh soil are found scattered widely throughout the Ganga plain.

In plateau region generally three types of soils are found. They are upland or rocky soils, low land or black soils and red and yellow soils. The black soils are fertile and fit for agriculture.

CLIMATE

Almost the entire state enjoys the tropical monsoon type of climate with exception to the Himalayan region where the climate is temperate. The seasonal variations of temperature are substantially large. The minimum temperature at some places drops down to about $3^{o}C$ in January and the maximum temperature rises to about $44^{o}C$ in May and June. The year is divided into three distinct seasons of winter, summer and monsoon rains. The coldest

months of the year are December and January while the hottest May and June in which the Ganga plain burns and scorches with hot waves of westerly wind called loo.

The rainy period known as the monsoon period prevails from June to September and heavy rainfall occurs. The rainfall is heaviest in the Himalayan region and it decreases from north to south and from east to west. There is 60 to 100 cm rainfall in the western region, while 100 to 120 cm in the eastern part of the plain. The plateau region receives an average rainfall of 100 to 120 cm The rainy season is marked by high relative humidity (70 per cent) which creates climatic discomfort.

POPULATION

The population of Uttar Pradesh according to the 1981 census was 110.86 millions consisting of 58.8 million males and 52.0 million females. According to the census 1971, the total population of Uttar Pradesh was 88.34 millions consisting of 47.0 million males and 41.3 million females. There has been a net increase in population a little over 22.5 millions during the period 1971 to 1981. In 1981 census 17.95 per cent population was urban and 82.05 per cent was rural. In the latest census of India,

the lowest population (0.19 million) was enumerated in Uttar Kashi while the highest (3.79 million) in Allahabad districts.

There is uneven distribution of population among districts of the state. More than 16 per cent of the total population of the country is unevenly distributed in the state over the 9 per cent of the total area of the country. If total population of Meerut (2.76 million) and Ghaziabad (1.84 million) districts together be compared with total populations of the states, we find that it is a little over the total population of Himachal Pradesh (4.28 million). While many of the northeastern states carry populations much less than single district of Allahabad (3.797 million).

The average population of a district works to 1.9796 million. There are nine districts each of which has a population of less than one million, whereas there are sixteen districts with more than 2 million population apiece. There are also twenty three districts with population ranging between one to two million while the eight districts in the state are also counted with population over three million.

The density of population in Uttar Pradesh for the year 1981 works to about 377 persons per km^2 while the average national density is as low as 208 persons per km^2. Uttar Pradesh, though standing first in terms of population and fourth in terms of area, comes ninth in terms of density.

The distribution of density among districts of the state varies from 19 in Uttar Kashi to 645 in Lucknow (1971 census). The wide variation in density is the result of physical, social and historical factors. The density of population, excluding Dehra Dun, is very low in the Himalayan region. In the plateau region too it is below the state average. Some of the districts of Tarai region and foothill zone of the Himalayas also have densities less than the state average. These districts (Shahjahanpur, Bahraich, Pilibhit, Kheri) are partly covered with forests and are not fertile enough to sustain denser populations. Densities exceeding the state average are mainly found in the Ganga plain, as this region is ideally suited to agriculture. It has been observed that low densities are accounted for the forest area, mountainous and swampy nature of the area, little cultivable land and unhealthy climate; while high densities are found in places with good alluvial land, healthy climate and excellent water supply for agriculture.

The growth rate of population in Uttar Pradesh has been below all India growth rate till 1971. In 1971-81 decade it is slightly above the all-India rate and is the highest ever recorded in this state. The population growth was low upto 1951 but thereafter it has been high. After 1951 the growth rate has been above 1.54 per cent per annum. It would certainly be more meaningful to consider the decennial growth of population in the state from 1901 onwards as the demographic picture emerges better with longer span of time (Table 2)

Table 2

Decennial growth rate of population 1901-1981

(in per cent)

Year	India	Uttar Pradesh
1901-11	5.75	-0.97
1911-21	-0.31	-3.08
1921-31	+11.00	+6.66
1931-41	+14.22	+13.57
1941-51	+13.31	+11.82
1951-61	+21.51	+16.66
1961-71	+24.80	+19.78
1971-81	+25.06	+25.49

Source: Census of India 1981, Series-22 Uttar Pradesh, Part II Special, Report and Tables Based on 5 per cent sample Data.

The sex ratio is defined as the number of females per thousand males. The sex ratio in Uttar Pradesh at each of the census year 1901-81 is given in Table 3.

Table 3

Population sex ratio in Uttar Pradesh - 1901-1981

Census year	Males	Females	Sex ratio
1901	25,098,994	23,528,661	937
1911	25,144,159	23,010,749	915
1921	24,452,475	22,219,923	909
1931	26,148,359	23,631,179	904
1941	29,640,728	26,894,426	907
1951	33,100,719	30,118,936	910
1961	38,638,307	35,116,247	909
1971	47,016,421	41,324,723	879
1981	58,819,274	52,042,736	885

Source: The same as in Table 2.

The sex ratio in the state has been adverse to females and has been well below the all India sex ratio in all the censuses. There is a slight increase in the sex ratio in 1981 compared to 1971.

In the 1981 census, 29.22 per cent of the population was registered as the main workers. Of the main workers 295.90 lakhs were males and 28.07 lakhs were females constituting 50.31 per cent of the male and 5.39 per cent of the female population respectively. Overall work participation rate for males has been decreased from 52.24 per cent to 50.31 per cent and that for female from 6.71 per cent to 5.39 per cent between 1971 and 1981.

In the census, literacy is defined as the ability to read and write with understanding in any language. According to the 1981 census, of the total population of Uttar Pradesh, 301.05 lakhs were literate. General literacy rate was 27.16 per cent while it was 21.70 per cent in 1971. The literacy rate in the urban areas was 45.88 per cent as compared to 23.06 in the rural areas. The urban literacy rate is higher than that in the rural areas in the case of both males and females but the differential is particularly noticeable in the case of females.

MIGRATION

On the basis of migrants by place of birth, there were 277.82 lakh migrants in Uttar Pradesh in 1981 made up

of 49.78 lakh males and 228.04 lakh females. These migrants constitute 25.06 per cent of the total population.

The total migrants on the basis of place of birth would include migrants within the state itself, migrants from other state to Uttar Pradesh and migrants from other countries to Uttar Pradesh, as shown in Table 4. Of the total migrants, 92.87 per cent were migrants within the state, 5.90 per cent were born in other states of India and 1.23 per cent were born in other countries.

Of the total migrants, on the basis of place of birth, migrants born within Uttar Pradesh constitute 92.87 per cent in 1981 as against 92.09 per cent in 1971. Among males the proportion in 1981 and 1971 were 86.49 per cent and 84.77 per cent respectively while in the case of females the corresponding proportions were 94.26 per cent and 93.92 per cent respectively. The higher proportion of migrants within the state among females is largely attributable to females leaving their place of birth after their marriage.

Of the migrants by place of birth in Uttar Pradesh 98.77 per cent represent internal migrants. Of the total internal migrants in Uttar Pradesh, 94.03 per cent represent

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The sex ratio in the state has been adverse to females and has been well below the all India sex ratio in all the censuses. There is a slight increase in the sex ratio in 1981 compared to 1971.

migrants from within the state itself, both intra-district and inter-district while 5.97 per cent represent migrants from other states of India to Uttar Pradesh, as shown in Table 5.

In the census 1981, migration data has been collected on the basis of place of last residence. On the basis of migrants by place of last residence, there were 280.59 lakh migrants in Uttar Pradesh made up of 50.25 lakh males and 230.34 lakh females. These migrants constitute 25.31 per cent of the total population of the state, with male migrants constituting 8.54 per cent of the male population and female migrants constituting 44.26 per cent of the total female population. Male migrants constitute 17.91 per cent of total migrants while females account for 82.09 per cent. Of the total migrants, 93.07 per cent migrants were within the state itself, 5.92 per cent had their last residence in other states of India and 1.01 per cent in other countries (Table 6).

Of the total population of 1108.62 lakhs in 1981, 16.61 lakhs had places of last residence in other states of India, constituting 1.50 per cent of the total population of the state. Of the total migrants of Uttar Pradesh in

Table 5

Distribution of internal migrants (in per cent)

Migrants by place of birth	1971			1981		
	Persons	Males	Females	Persons	Males	Females
1	2	3	4	5	6	7
A. Migrants within the state of enumeration to total internal migrants	94.18	89.28	95.36	94.03	89.63	94.96
B. Migrants from other states in India to total internal migrants	5.82	10.72	4.64	5.97	10.37	5.04
C. Internal migrants to total migrants	97.78	94.95	98.49	98.77	96.50	99.26

Source: As same as in Table 2.

Table 6

Migrants by place of last residence (in per cent)

Place of last residence	1971			1981		
	Persons	Males	Females	Persons	Males	Females
1	2	3	4	5	6	7
A. Migrants within the state of enumeration to total migrants	92.38	85.52	94.12	93.07	86.84	94.43
(i) Migrants who have resided elsewhere in district of enumeration to total migrants	64.67	49.79	68.44	62.78	48.46	65.90
(ii) Migrants who have resided in other districts of the state to total migrants	27.71	35.73	25.68	30.29	38.38	28.53
B. Migrants who have resided in other states of India to total migrants	5.77	10.45	4.58	5.92	10.37	4.95
C. Migrants who have resided in other countries to total migrants	1.48	3.75	0.90	1.01	2.79	0.62

Source: As same as in Table 2.

1981, 1.01 per cent had place of last residence in other countries as against 1.48 per cent in 1971.

Table 7 indicates the distribution of internal migrants by place of last residence. It shows that according to 1981 census, 94.02 per cent migrants were from within the state itself as against 94.12 per cent in 1971. The quantum of internal migration within the state has, therefore, been roughly of the same order in 1971 and 1981. Of the total male internal migrants, 89.33 per cent have moved within the state itself while 10.67 per cent have moved into the state from other states of the country.

The distribution of total movement within the country among the rural to rural, rural to urban, urban to rural and urban to urban components is closely related with the degree of economic and social development. When a state or a country passes through different states of development, the dominance of rural to rural type will gradually give way to rural to urban and lastly to urban to urban. The doctoral work will include the interdistrict migration data based upon place of birth and place of last residence for the two decades of 1961-71 and 1971-81 movement. With the help of the data there will be a detailed discussion about the migration provoking factors

Table 7

Distribution of internal migrants by place of last residence (in per cent)

Place of last residence	1971			1981		
	Persons	Males	Females	Persons	Males	Females
1	2	3	4	5	6	7
A. Internal migrants to total migrants	98.15	95.97	98.70	98.99	97.21	99.38
B. Migrants within the state of enumeration to total internal migrants	94.12	89.11	95.36	94.02	89.33	95.02
C. Migrants from other states in India to total internal migrants	5.88	10.89	4.64	5.98	10.67	4.98

Source: As same as in Table 2.

who stimulate a certain number of people to move from a place of origin to a place of destination. In the light of these it can be observed to find out the reasons why certain districts or regions attract more people than others. Similarly an investigation will be made about the principal causes which have made many districts or regions to expel more migrants than others, consequences will also be dealt with. Keeping these things in view the proposed doctoral thesis will be completed under the following chapters:

INTRODUCTION

PART ONE - THEORY

CHAPTERS

I Conceptual framework of internal migration

II Determinants of internal migration

III Effects and consequences of internal migration

IV Theories of migration

V Procedure for migration analysis

PART TWO - EXPERIMENT

PART THREE

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